Social Strain: a Sociological Analysis of Violent Crime Rates in Europe

by

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Introduction

Among the multiple aspects regarding violent crime, to explain its social roots is a particularly complicated endeavour. And it can get increasingly daring if our interest is to explain differences at an aggregate level like: Why does a society have higher rates of homicide? What makes of a social environment a crime-prone context? One way of answering these questions is the macro perspective, represented by a group of historical and sociological studies that explain the effects of long-term socio-historical processes in the reduction of violence and aggression in Western societies. Their analysis of the decline of aggression and violence form the middle ages to the 20th century, is based on the influence of macro-social processes like: the emergence of urban centers, increasing informal and formal control (Gurr 1981; Gurr 1989); the emergence of the nation-state and its monopoly of violence (Tilly 1980; Tilly 2003); the psycho-social processes restraining aggression into organized social interactions (Elias 1983; Elias 1994); the regulation of interactions between young men in public space; and the improvement of medical technology (Eisner 2001; Eisner 2003).

Different from the historical perspective, the criminological and the sociological explanations are interested in the social aetiology and social ecology of violent crime. Their approach can be classified in four groups: anomie-strain; economic-conditions; social disorganization; and control theories. For the case of anomie-strain, its core is shaped by one idea: the relation between the binomial social structure/culture and crime. According to this prototypical sociological approach, crime is a sub-product of society's social structure brought about by the alteration of restrains and opportunities of social behaviour. Along with this, an anomic context is the result of a culture that increasingly "[…] celebrates individual identity, achievement, and success, but at the same time neglects social responsibility, altruism, and mutual interdependence, the outcome is one of unlimited aspirations, some of which are pursued trough criminal behaviour." (Henry and Lanier 2006:153) Then the anomic context becomes a source of strain when individuals' position on the social structure hinders the fulfilment of the culturally stipulated goals. The classic example is the American Dream, where frictions caused by the increasing differential between social inequalities and the culture-motivated search for material success create an appropriate context for criminal behaviour. This environment disturbs everyday life, and engenders depression, isolation, anger, and frustration (Merton 1938).

The economic-conditions approach represents a group of explanations based on the role of economic processes, particularly economic stratification, as primordial variables in the

generation of criminogenic contexts. Basically, their explanations are based on two general arguments. The first one points to the direct effects of poverty and/or economic inequality as criminogenic factors, while the second one is focused on the combination of economic and social stratification (Braithwaite and Braithwaite 1980; Krahn, Hartnagel et al. 1986; Fiala and LaFree 1988).

The social disorganization approach argues that the central question should not be focused on the emergence of a social context (aetiology), but on the reasons behind the criminogenic characteristics of such context (social ecology). Under this perspective, a criminogenic context is clearly created by economic deterioration, impoverishment, and deindustrialization. However, it is not clear which mechanisms might turn those distressed communities and neighbourhoods into crime-prone areas. For the social disorganization theory, the answer lies in to which extent communities' ability to implement informal and formal social control becomes weakened. The loosening of these capacities is caused by the alteration of local organizational structures by means of: extended communities; residential mobility; high-rise housing; and limited presence of formal organizations like schools, churches and police (Krohn 1978; Wilson 1987; Sampson, Wilson et al. 1995; Kubrin and Weitzer 2003).

Finally and not very distant from social disorganization, we have the control theories. This group brings together various perspectives sharing a particular research strategy: instead of inquiring what drives people to commit crime, they ask why most people do not commit crime. Hence, they seek to improve social commitment (stronger social bonds and compliance to rules) as a crime reduction strategy. Similar to social disorganization, the argument goes that social commitment can be achieved by strengthening local organizational structures of formal and informal control: institutional involvement, parenting improvement and increased potential of supervision and control (Hirschi 1969; Gibbs 1982; Gibbs 1989).

These perspectives have been widely applied in order to clarify the variation of violent crime rates among single units (communities, cities, states or nations), as well as for the cross-sectional analysis of violent crime. Unfortunately, their application on cross-national and longitudinal schemas has not been widely practiced. However, the few available works following this trend have helped us to get a picture of the distribution of violent crime. For instance, higher rates are usually found in urban areas with a high percentage of young male cohorts, characterized by rapid population growth, and particularly in periods of economic

distress (LaFree 1999; Fajnzylber, Lederman et al. 2002; Messner, Pearson-Nelson et al. 2008).

Besides a better description of the distribution of violent crime, the cross-national research has made one particularly interesting finding. The cornerstone of the comparative research on violent crime is the positive association between the increment of relative deprivation and violent criminality. This relation is the most stable and empirically tested association at aggregate level between an economic variable and criminality (Messner 2003). In the literature, the discussion derived from this finding revolves around the description and explanation of the mechanisms that make relative inequality a criminogenic factor. At this moment there are not enough studies that have pointed out a particular mechanism, however, it has been found that when external factors like ethnic composition, segregation and disorganization are attached to relative deprivation (Albrecht 2003), the probability of violent crime increases.

Notwithstanding these ideas and lines of investigation, because of the slight presence of cross-national research on violent crime, we still have a very limited picture about the differences at an aggregate level. With the available evidence, we do not know much about which mechanisms account for the emergence of a criminogenic context, nor as to which extent may those mechanisms be different in other countries. For example, without more cross-national research it is impossible to known if the pervasive effects of inequality may retain their importance in different societies; or to what extent those effects depend on structural, historical or institutional factors particular to a national context. Furthermore, we do not know if the external factors associated to inequality remain the same in other contexts; or if the relief from economic distress will always depend on the influence of public institutions of social assistance. In general, those open questions make clear that we can not go further on our aetiological or ecological explanations without cross-national research.

If the aforementioned argument is accepted as a relevant claim, then the improvement of comparative research must be placed in a high priority, particularly in one aspect: the gap between theory and comparative research. Presently, comparative research and theory development are working at distance from each other. Only a small number of studies have been interested in applying a comparative framework as a feedback-based strategy to improve theory. On the contrary, comparison has been mainly applied as a confirmative tool. The downturn of this strategy is that it misses the analytic potential of a theory-based comparative

research. The basic idea is that the strength of the comparative perspective does not come from the confirmation of a hypothesis, but from the analytic descriptions that might be derived from it. If we are interested on the etiological and ecological explanation of violent crime, a comparative approach could improve our theoretical explanations by not only rejecting some argument or mechanism, but also by detecting parallel or alternative combinations that can still be meaningful within a theoretical framework.

Currently, there are good opportunities to go further on the development of comparative studies. Particularly, the research based on homicide as an indicator of violent crime is quite promising. The cross-national research on homicide rates has clearly some advantages in comparison with other types of crimes. Firstly, although the legal definitions of homicide are not completely homogeneous among countries, their degree of variation is notoriously smaller than for other crimes (Monkkonen 2001). Secondly, the difference between committed homicides and the ones that were reported to the police is also smaller. Parallel to this, infrastructure and data recollection practices have been improved with the creation of more national level and sub-national level databases; the implementation of additional data gathering protocols to ensure reliability; the creation of even more homogeneous definitions of crimes in order to improve data comparability; the increased participation of specialists on the committees and commissions entrusted with the elaboration and maintenance of databases; and the implementation of open distribution policies (i.e., Eurostat and the Inter-University Consortium for Political and Social Research).

For these reasons, this work intends to take advantage of this juncture and contribute to the development of comparative studies. However, to make a solid case this research pursues three general interests: to improve the comparative studies on violent crime; to bring closer theoretical questions and methodological problems; and to find an innovative and solid explanation of the contextual conditions accounting for the variation of violent crime in sub-national units.

This research is expected to find particular contextual configurations at a meso-level, which are probabilistically connected with the variation of violent crime rates. The connections or social mechanisms identified at the meso-level are a viable depiction of the form in which contextual configurations may exert some influence in the increasing of violent crime rates. In this case the probability associated with violent crime is influenced -but not determined- by the meso-level context.

In order to assess to a greater extent the probability of violent crime, the adjacent (or parallel levels) must also be considered. The idea is that a particular configuration at the macro-level is associated with a probable configuration at the meso-level, and in turn the resulting configuration at the meso-level is associated with a limited number of possible combinations at the micro-level. In other words, my approach to the contextual analysis of violent crime will not only seek to identify contextual factors affecting violent crime rates, it will also include a methodological proposal to allow a better understanding of the connections between levels as associated (or constrained) probabilities. It will constitute a methodological blue print for the understanding of aggregate phenomena. This can be especially interesting for the study of violent crime, and it will help us to avoid falling on misleading interpretations of mechanisms or associations between variables. With this idea in mind, I am directing my analysis exclusively to what is happening at the meso-level. However, my schema remains methodologically and theoretically open to the influences (or associated probabilities) coming from the macro-level, and eventually from the meso-level.

Based on this approach, this work will pursue four general objectives: firstly, the identification of the contextual configuration linked with violent crime, that is, the material conditions produced by interrelations between socio-economic conditions, social stratification, institutional frameworks and socially structured access to opportunities. Secondly, to describe the form in which these components are articulated in particular contexts to generate criminogenic contexts. Thirdly, to find a theoretically-based model capable of being applied to empirical research. Fourthly, bring together theoretical discussions to the requirements of comparative research.

To achieve these goals, I have structured my work in four sections: the first one is a diagnostic of the state of the art of comparative studies on violent crime; the second one is a theoretical review and an analysis of the two theoretical pillars of my approach to violent crime and homicide; the third section presents the concept of social strain as my theoretical framework for the comparative study of violent crime; and the fourth section presents the results of my empirical study.

I have divided these sections into five chapters. The first chapter reviews the present state of comparative research on violent crime and particularly on homicide. It will address three basic topics: the place of comparative studies in criminology; the cross-national research on homicide; and the problems that need to be dealt with in order to improve the comparative study of homicide. The second chapter is a critical reconsideration of the economic explanations of crime. For my purposes, I have classified these explanations as follows: the

rationality-based approach; the political economy of crime; and the explanations based on economic deprivation. The third chapter is a general review of the sociological approach and of the anomie-strain tradition in particular. In this chapter the anomie-strain tradition is represented by the works of Durkheim, Merton and the Institutional-Anomie Theory. The fourth chapter brings together the main threads of the previous chapters into the concept of social strain. Its objective is to argue in favour of social strain as a methodological and theoretical plausible concept for the comparative study of homicide rates in Europe. Finally, in the fifth chapter I translate the concept of social strain into a model that seeks to explain how a particular contextual configuration at the meso-level may be probabilistically associated with higher rates of violent crime. For the empirical study, factorial analysis and structural equation modelling have been applied in order to find social strain amongst a non-random sample of 193 Western European regions from 2001 to 2006.

I. Living in Flatland? The Cross-National Study of Homicide

The study of crime and deviant behaviour is an enormous area of research that has largely attracted the attention of social and behavioural sciences. As a result, in the 20th century criminology emerged as the primordial discipline for the study of crime. With intellectual roots going back to the 18th century, nowadays criminology is a highly structured and institutionalized social science discipline, involving the study of victims, offenders, justice systems, social control, penal practices, and crime prevention.

The place of homicide studies in criminological work has been defined by three perspectives: socio-structural, cultural, and evolutionary-psychological. There are three points of interest shared by these perspectives: the relation between homicide and social group membership (gangs, youths, ethnic, women, etc); the probability of prevention through deterrence, public health, drugs control and guns control; and methodological issues on data sources, definition of homicide, and its units of analysis. A great part of the empirical research on homicide has been concentrated in Anglo-Saxon industrialised societies (United States, England and Australia). As a consequence, we have a limited pool of theories and methodological instruments to describe and explain violent crime in other societies, and consequentially, an underdeveloped cross-national study of homicide.

In terms of theory, methods, and empirical evidence, there is a considerable distance between what is actually known about homicide in Western countries and in the rest of the world. Moreover, there is a worrying absence of proper theoretical and methodological instruments to analyze other contexts where homicide takes place. The absence of a cross-national approach to investigate other histories, structures and cultures connected with the phenomena of homicide and violent crime, limits the explanation capacities of the actual theories of violent crime.

In a recent article about the use and abuse of econometric methods to corroborate relations between homicide and capital punishment, Ted Goertzel and Benjamin Goertzel finished their argument with a reference to Edwin Abbot's fairy tale (1884) *Flatland*. "In *Flatland* everything moves along straight lines, flat plains or rectangular boxes. If you plot the heights and weights of a group of *Flatlanders* on a graph with height on one axis and weight on the other, all the points fall on a straight line." (Goertzel and Goertzel 2008:250) Although the actual situation of the study of homicide has not reached that extreme, the analogy is a useful warning.

This first chapter digs into this problem, through the illustration of the actual scope and reach of the cross-national study of homicide. In this section, I show its heuristical properties and more consuming problems. Firstly, I will make a brief review of the intellectual and institutional origins of criminology. Secondly, I will identify the place of the comparative approach in the contemporary criminological research. Finally, I will describe the actual situation of the cross-national inquiries on homicide, and its theoretical and methodological limitations.

I.1. The double structure of criminology

The actual scope of criminology is well comprised in the definition posted by The American Society of Criminology: "the scientific and professional knowledge of the aetiology, prevention, control, and treatment of crime and delinquency, the measurement and detection of crime, legislation, and the practice of criminal law, the law enforcement, judicial, and corrections systems."[1] In terms of discourse, criminological work tries to differentiate itself from other areas with its scientific distance from moral and legal positions about crime. Concerning the scientific study of crime, there is also one –at least institutional- difference between criminology and other disciplines. In sociology, for example, crime is an important object of study, yet it is treated as a subcategory of a wider concept of deviance and deviant behaviour. In the same sense, psychology is interested on crime from a behavioural approach, but without considering its relations with other levels of observation like social institutions and structures.

The intellectual rationale of criminology comes from two traditions of the eighteenth and nineteenth century: the governmental project and the Lombrosian project. “By talking about a ‘governmental project’ I mean to refer to the long series of empirical inquiries, which since the eighteen century, have sought to enhance the efficient and equitable administration of justice by charting the patterns of crime and monitoring the practice of police and prisons. […] The ‘Lombrosian project’, in contrast, refers to a form of inquiry which aims to develop an etiological explanatory science, based on the premise than criminals can somehow be scientifically differentiated from non-criminals.” (Garland 1997:12) The influence of these traditions left its definitive imprint on the characteristic duality of criminology: its policy orientation and scientific orientation.

The scientific ambitions of criminology have fostered the adoption of theories, methodologies and techniques from a wide variety of disciplines (sociology, psychology,

[1] Webpage of The American Society of Criminology, http://www.asc41.com/index.htm

psychiatry, law, history, and anthropology) to construct its own instruments. These multiple influences are clearly reflected on its institutional placement in departments of law, sociology or social policy. Because of this multidisciplinary character, the scientific research on crime has also been defined by a double character: the behavioural approach and the social approach. The first includes studies dealing with the individual and his motivations towards crime, while the latter is based on a particular definition of crime as a social fact, in which cause and effect can be understood only as phenomena embedded in social structures and social contexts.

Despite the high institutionalization of the criminological project and its close contact with other disciplines, the comparative research in criminology is still underdeveloped. The comparative perspective suffers from two important problems critically appointed by Garland: the absence of tradeoffs with crime theory and social theory, and the lack of interest on the re-examination and renewal of its methodological approach. The presumable reason for such stagnation is the porosity of the whole discipline to contextual pressures and influences: "As a discipline criminology is shaped only to a small extent by its own theoretical object and logic of inquiry. Its epistemological threshold is a low one, making it susceptible to pressures and interests generated elsewhere." {Garland, 1997 #368:21. Apparently, such forces have never coincided on the impulse of the comparative research.

I.2. The comparative approach in criminology

In almost all areas of contemporary social sciences, comparative studies are an appealing methodological approach. The application of research questions and hypotheses to different units of analysis not only implies the possibility of testing the generalizability of an explanation, it also works as an accurate depiction of central theoretical and methodological problems of a discipline. Unfortunately, the comparative research in criminology has occupied a secondary place in terms of theory, methodology and empiric research {Zimring, 2006 #348;Zimring, 2008 #347}. Although its methodology has been appointed as the method *par excellence* of the social sciences (Durkheim and Lukes 1982; Barak-Glantz, Johnson et al. 1983; Peters 2001; Godfrey, Emsley et al. 2003), the comparative perspective in criminology has experienced particular difficulties that have hindered the elaboration of wider criminological research.

An interesting difference are the places comparative methodology occupies in criminology and political science, respectively. In the modern history of the two disciplines, the comparative approach has always been present as a research tool to produce valuable

information about their objects of study. However, at some point, its development followed different paths and its disciplinary weight changed. There are two reasons behind these differential paths. First, the determinant influence of the Cold War for the growth of North American comparative politics in the 1950s (Apter 1998). Second, the early adoption of the comparative method as a fundamental empirical tool of political science, through a solid connection between philosophical and theorical debates with the empirical research. The stable trade-off among the main theoretical core of political science and its empirical enquiries, made of comparative politics the empirical method of political theory. As a result comparative politics was transformed into a relevant area of study with its own distinctive intellectual traditions[2] and remarkable works: *The Civic Culture* by Gabriel Almond and Sidney Verba (Almond and Verba 1965); *Social Origins of Dictatorship and Democracy: Lord and Peasant in the Making of the Modern World* by Barrington Moore (Moore 1966); *States and Social Revolutions: A Comparative Analysis of France, Russia, and China* by Theda Skocpol (Skocpol 1979); amongst others.

For the case of criminology, the weight and interest around the comparative methodology has been quite different. Since its foundation, there was a latent concern about comparative research. For example, Gary LaFree in his historical examination of criminology (LaFree 1999) quotes a paper of H. Campion (1949), and finds the first footprints of an interest on collecting international comparable data of crimes in 1853. The place was the General Statistical Congress in Brussels organized by the father of the usage of statistics on the social sciences: Adolphe Quetelet (1796-1874). However, this primordial impulse did not find resonance in the coming years, and the comparative methodology stayed distant from the core of criminology.

As a consequence, although comparative criminology has a modest presence in some journals, readers, and companions, it is still very limited in comparison with political science. One explanation is the absence of debates about the complexity of comparative methodology. In the current literature, there is very little methodological agreement on how a comparative criminology perspective should work. The textbooks roughly describe it as the study of crime and crime justice systems in different nations and cultures; but as stated by Nelken, these descriptions "[…] rarely brought into sharp focus what such comparisons were designed to achieve." (Nelken 1997:559) This notorious absence has produced theories enclosed in national contexts and is hardly extendable to other social realities.

[2] The more important are: the Institutionalism, Developmentalism and Neoinstitutionalism

If we look into the actual state of criminology, it is clear that its theories are often limited by a strong provincialism and with serious deficiencies to explain crime in other national and cultural contexts. A good example of this embeddedness is the development of the criminology in the United States. There is no doubt that the growth and institutionalization of American criminology gave rise to important theoretical explanations on a wide array of aspects of crime phenomena.[3] Nevertheless, American crime research has been characterized by a strong compartmentalization in specific national spaces, and has not yet properly conceived a way to explain crime in other national and cultural contexts.

There is a notorious absence of proper theories and methodologies to analyse crime phenomena in contexts other than the Anglo-Saxon.[4] The most important criminological theories such as social disorganization, situational perspectives, anomie-strain, and sub-cultural have not been extensively applied outside the USA. And in the fewer cases where it has been done, the empirical support has been rather weak. The underrepresentation of non-Western realities (Sheptycki and Wardak 2005), implies an important frontier for the criminological project, like the one proposed by Gottfredson and Hirsch: "Rather that assume that every culture will have its own crime with its own unique causes which need to be sought in all their specificity, the object of criminological theorizing must be to transcend cultural diversity in order to arrive at genuine scientific statements." (Gottfredson and Hirschi 1990:172-3) However, to transcend the cultural diversity and the national specificities, they must first be captured in a theoretical schema, and the only viable way of accounting such differences inside one or more theoretical approaches is through comparative research.

In the 1970s criminology experimented with an important wave of methodological, theoretical and almost epistemological modifications that unfortunately did not improve the place of comparative research. While in the social sciences the "linguistic turn" represented a strong questioning of the epistemological and methodological approach to the object of study, criminology experienced its own version: "the survey turn". Generated by the appearance of new techniques to collect quantitative and qualitative information, the extensive usage of survey methods was accompanied with the emergence of the "victim approach" or victimology, which helped to clear various aspects of unrecorded crime. As a result, the

[3] By comparing the particular national traditions and histories it can be said that one of the most important differences between the European and American criminology was that the sociological approach (anomie-strain, social disorganization, labelling approach, etc) found more fertile ground in the American universities than in Europe, where the traditional versions of criminology (law and psychology oriented) occupied a foremost place; at least till the eighties. Haen-Marshall, I. (2001). "The Criminological Enterprise in Europe and the United States: A Contextual Exploration." European Journal on Criminal Policy and Research **9**(3): 235-257.

[4] This has been and enduring reality of crime and deviance research, however, there are signs of new efforts towards widening the focus to other contexts with the aid of quantitative and qualitative instruments, like the work of Pridemore in Russia and Messner in China.

traditional criminological scope became expanded from offenders, police and justice systems, to include the study of victims, and their perceptions of crime. At the same time, new issues obtained a relevant place on the debate like: new types of crimes; the problem of institutional bias; the shift form the offender to the circumstances of the offence; and the consequences of the "governmental project" in the scientific work of criminology (Karmen 2009). Because of the relatively technical easiness of applying a survey, some researchers also saw a window of opportunity to gather new data from other social units. However, great part of the research made with survey data remained limited to the comparison of sub-national units of a same country, leaving the cross-national research unattended.[5]

I.3. Cross-national research on homicide

Even though the comparative perspective has not been in the spotlight of the discipline, studies based on a cross-national design have maintained a subtle presence in the macro research. In the late 1970s, early 1980s, and in the beginning of the 21st century, the macro explanations of crime and deviance found resonance in the scientific scenario. In a meta-analysis of the macro predictors of crime, Pratt and Cullen (Pratt and Cullen 2005) have found more than 200 articles in specialized journals of sociology, criminology, criminal justice, and economics, trying to identify and create confident predictors for aggregate crime rates for three mayor categories of crime: homicide, assault and property crime.

For the case of homicide, much of the available research has been made with national data. In nations with better infrastructure (e.g. USA and UK) the collection of homicide data has became part of the national research policy. In contrast, the situation of empirical data in other nations is far away from the practices adopted in the USA and the UK, creating huge disparities between the kind of analysis conducted -in terms of scope and empirical base-, and hindering the possibility of a wider comparative design.

Notwithstanding the unfavourable conditions, the cross-national research on homicide exists with a subtle presence of no more than forty published papers in the last three decades (Neapolitan 1997; LaFree 1999; Messner 2003). The few studies applying a cross-national design have two general characteristics. First, a majority of works are not exclusively from criminology but from other disciplinary fields (i.e. sociology, history, economics, political science, anthropology and law). Second, the studies have been mainly based on three

[5] There are few examples in the literature of cross-national research based on surveys. Notable exceptions are Van Dijk, Dijk, J. J. M. v., P. Mayhew, et al. (1991). Experiences of crime across the world : key findings from the 1989 International Crime Survey. Deventer, Netherlands, Kluwer., and Koffman Koffman, L. (1996). Crime surveys and victims of crime. Cardiff, University of Wales Press.

theoretical perspectives: modernization-social disorder, economic stress and situational perspectives.

A common practice is the use of aggregate data because of its accessibility, and its higher levels of definitional standardization and homogeneity. For example, through the historical analysis of the drop of rates of violent crime in developed nations (Archer and Gartner 1984; Eisner 2001; Aebi 2004), it has been found that the official definitions of homicide have considerable stability across long periods of time. The data used in the most recent studies usually comes from a group of international official sources: the International Criminal Police Organization (INTERPOL); the World Health Organization (WHO); and the United Nations Surveys on Crime Trends and the Operations of Criminal Justice Systems. There are also two important non-institutional databases: The Comparative Crime Data File (CCDF) (Archer and Gartner 1984); and the European Regional Crime Database (ERCD) (Entorf and Spengler 2004).

The major empirical findings can be generalized in seven points. First, there is an identifiable difference between the independent variables associated with homicide and property crime. Second, measures of economic development and levels of industrialization have not shown a stable relationship with homicide. Third, one of the more stable relationships tested in the comparative research has revealed that economic inequality is correlated with the variation of homicide. Fourth, the relation with levels of unemployment is not significant. Fifth, in contradiction to the almost common sense association between urban areas and higher levels of crime, the cross-national research has not found definitive support for the existence of higher levels of homicide in urban concentrations. Sixth, the distribution of homicide is different across specific gender and age groups. Seventh, the proportion of youths between 15-25 years and -more clearly- population growth are positively associated with homicide rates (Neapolitan 1997; LaFree 1999; Messner 2003).

I.4. Theory related problems of cross-national research on homicide

Based on this general findings, there are two theory-relevant arguments that can be extracted from the evidence. The first one concerns the geographical distribution of homicide, and the characteristics of the group with higher risk of being involved in that conduct: homicide tends to be concentrated in highly populated urban places, and the risk-group is young men between 15-25. The second is related with how modernization-social disorganization, economic stress, and the situational perspective explain the role of economic conditions as criminogenic factors. For modernization and social disorganization, there is an indirect influence of

economic conditions on crime, where the impact of economic processes (economic development, industrialization or inequality) primarily affects the normative order and social control capabilities of social aggregates, creating crime-prone contexts where homicide rates tend to be higher. On the other hand, economic stress explains this effect as a straightforward influence without the mediating effects of social elements. Finally, the situational perspective sees changes in economic conditions as factors generating modifications in everyday life, which in turn increases the dispersion of activities away from home, which consequently heightens the opportunities for certain types of crime.[6]

The previous evidence has not opened new ways of implementing a more illustrative explanation of national homicide rates. With the current state of research on homicide, there are not enough explanations and empirical evidence to paint a more complex perspective of homicide and violent crime. For example, there is no place for questions about the differential effects of the independent variables like: how some contextual characteristics may hinder the probability of criminogenic context; the combination between social and ethnic disadvantages (in terms of spatial co-occurrence); and the relation between community size and contextual characteristics, among others.

If the complexity of a social phenomenon like homicide should be understood, the research must be open to new styles of work. It is needed to change our research strategy in order to make of the cross-national research not only a confirmatory instance of some hypothesis, but an important part of a chain linking theory, methodology and empirical work. There are important aspects of violent crime that could be better grasped with cross-national research: 1) identify the relevance that other elements of the social context may have in different national and sub-national units; 2) distinguish the probable complex relations among the independent variables, and their differential effects; 3) the improvement of the actual static explanations into dynamic models; and 4) an important point mentioned by Messner "[…] to illustrate the relevance of macrosociology as an explanation of violent crime; by reassuring the importance of "how basic features of social organizations like demographic structures, institutional arrangements and broad general orientations help to understand crime." (Messner 2003:702)

[6] The routine activities approach, for example, predicts lower crime in societies with active guardianship norms, decentralized populations, low levels of youth mobility and independence, and women engaged in homemaking roles rather than involved in the paid labour market. Cohen, E. L. and M. Felson (1979). "Social Change and Crime Trends: A Routine Activity Approach." American Sociological Review **44**(4): 588-608, Cohen, E. L., M. Felson, et al. (1980). "Property crime rates in the United States: A macrodynamic analysis 1947-1977 with ex ante forecast for the mid-1980s." American Journal of Sociology **86**: 90-118.

To cover these points, the theoretical framework supporting the comparative research must include two basic characteristics. First, produce middle range concepts (working at the meso-level of observation) with the capacity of capturing variations coming from different contextual conditions, and breaking the prototypical stiffness of the actual schemas of cross-national research. Second, it must conceptually comprise the possibility of mediation effects between independent variables. Only in this form it will be possible to include in our explanations of violent crime the missing social mechanisms that had not been satisfactorily introduced in the literature (Chamlin and Cochran 2006).

I.5. The methodological problems of homicide research

The improvement of the theoretical arguments of cross-national research on homicide needs to be accompanied with a parallel reflexion on methodology. There are three particularly important points where the debate needs to be focused: what is compared, how variables are compared, and the level of observation.

In the actual cross-national research, it is not a common practice to discuss the selection criteria of the cases under study. More oriented by practical objectives, the selection of what is compared is often left to data availability, and not based on research objectives to emphasize similarities or differences within a group. To highlight the similarities, the researcher needs to select cases with substantial differences (i.e., different cultural, historical and political contexts) as a mean to discover the commonalities that could throw some light on a specific problem. In the other way, the comparison of cases with similar characteristics results in the identification of differences within analogous cases.

Each strategy has the capacity to illuminate important aspects of a specific problem, and its usage must be decided according to research aims and theoretical needs. The comparison between dissimilar cases is more sensible to the identification of the effects of local contexts or contextual variables. On the other hand, the comparison of cases with higher similarities operates the other way. In this case, the existence of more homogeneous contexts -characteristics assumed as common features within cases- tends to illuminate the non-local factors. In this schema, if similar cases have been compared and no difference emerges, it implies that the local contexts are not relevant, and that the focus should be centered on the differences between cases and not on the similarities.

Closely connected with the question about what is going to be compared, inquiries about how to compare are also strongly needed. Comparative methodology has two possibilities to study a specific theme: the descriptive approach and the analytical approach.

The first is considered as the elemental form of comparing two or more cases, and its main objective is to identify differences and similarities between them. The descriptive comparison is an exploratory exercise to obtain more detailed characterisations of specific cases. This kind of comparative work is an elemental tool for the social sciences to identify non self-evident relations. The descriptive comparison is an inferential process, where theoretical questions do not usually guide the comparison. All the theory related questions emerge right after the comparison to make sense of the gathered information with different theoretical frameworks. The analytical approach, on the contrary, is strongly guided by theory-oriented questions. As a deductive process, the analysis of the data is conceived to corroborate a previously hypothesised relationship between two elements (i.e., dependent and independent variables). The great advantage of this approach is the closer dialog between theory and empirical evidence, which fosters the constant review of the hypothesis in relation with the empirical evidence at hand.

Finally, as important as "what" and "how" variables are compared, the proper specification of the level of analysis is a methodological issue often neglected in the literature. In comparative methodology, the specification of the level of analysis is based on the size of the unit of analysis, the aggregation level of dependent and independent variables, and the type of relationship linking the variables. The correct specification of the level of analysis implies the advantage of coherence between theory, empirical evidence and final results. This coherency allows the researcher to postulate stronger inferences and deductions on concrete problems. This strength comes from the fact that an explanation will exploit its development possibilities, but within the epistemological limits of the level of observation.

These three methodological aspects of comparative research are particularly helpful to illuminate features of homicide and violent crime that have not been entirely present in the research. If we begin to apply cross-national designs as a method to make better inquiries about the differential distribution of homicide rates, our theoretical explanations will definitely profit form this exercise. Particularly interesting is how these methodological steps may be an appealing resource to assess how criminogenic contexts are generated under different social conditions. For example, in the last ten years, criminological and sociological research has generated increased evidence of differences in the aetiology of crime in relation with the units under study. It is already known that the relations involved in the variation of crime may change according with the stage of economic development: industrialized countries, emerging economies, and poor countries (Fajnzylber, Lederman et al. 1998; Fajnzylber, Lederman et al. 2002). However, recent studies have also shown other crucial

factors determining increases on criminality. One exciting example is the analysis of the criminogenic effects of drastic social, political and economical changes on national crime rates (Pridemore 2003; Gruszczynska 2004; Pridemore, Chamlin et al. 2007; Stamatel 2008). These findings generate questions that may be satisfactorily explained with a cross-national approach as a strategy to explain those differentials through the identification of social mechanisms.

Named by some authors as middle-range theories (Merton) or meso-level mechanisms (Elster), the theoretical and methodological significance of social mechanism is an important absence in homicide studies. If the application of comparative methodology made it possible to identify relations between variables particular of a social unit, then it would be plausible to recognize the origins of the exceptionalities through the concept of social mechanisms. If it is possible to localize these levels specific mechanisms, it could also be viable to advance a step further on the explanation of prototypical cases like the difference between historical levels of homicide rates in the USA and in Western European countries. Moreover, a comparative approach will help to scrutinize in the non-exceptional cases and probably find mechanisms related with lower rates of violent criminality. There are already traces of these mechanisms inside the European welfare structure. Unfortunately, we do not fully know how and to which extent social mechanisms embedded at the meso-level in West European contexts may act as suppressing factors of homicide.

In my view, one of the most important objectives of the comparative cross-national research on violent crime is the depiction of the social mechanisms at the meso-level as a way of extracting the peculiarities of regional contexts, and its introduction into our theories of violent crime. The comparative perspective should help us to get a better description and understanding of the possible elements mediating or conducting the effects of the contexts, up to the point where the contexts reveal a motivation of individuals to commit crimes (Oberwittler and Karstedt 2004).

In sum, in comparative research and particularly in the cross-national, there is a huge necessity for developing a methodological blueprint to deal with the methodological question in a more consistent way. One possible strategy would be to bring closer theory and comparative research, so that the systematic reflexion on methodology could be accompanied and supported by the corresponding reflexion on theory.

Conclusions

In this initial chapter, I have presented the actual state of comparative research in criminology with special focus on my area of research: the cross-national study of homicide. I have also tried to justify its importance as a research topic that is strongly connected with fundamental issues on methodology and theory. My interest on its methodological and theorical situations goes against the improvement of cross-national research based only on the application of sophisticated techniques of empirical analysis. This study will not be next to those using a cross-national design to test a specific theory or part of it. In this work, I will try to implement a two-way stream between theory and empirical evidence. Here the discussion about theory is not going to be supplanted by the instrumental use of statistics and econometric methods. This work is not in accordance with the guidelines of some a of research where the discussion is more technical instead of theoretical; nowadays, much of the criteria determining the relevance of a paper, research report, or book depends more on which new technique has been used to prove a hypothesis than the argumental construction of the hypotheses itself (Goertzel and Goertzel 2008).

On the contrary, one of the objectives of my research is to make a contribution on the continuing debate on theory and methods, as undeniable elements of any kind of comparative research in the social sciences, with special emphasis on the study of violent crime and homicide. Like Karstedt and Oberwittler (Oberwittler and Karstedt 2004), I see the comparative research on violent crime as a convenient tool for the development of the structural perspectives in the sociology of crime. Therefore, in the next chapters, I will delineate my theoretical framework for the explanation of cross-national homicide rates. Based on the economical explanations of crime and the anomie-strain tradition, I will try to develop a meso-level theoretical framework for the comparative study of violent crime. My proposal will emphasize the causal mechanism related with the variation of homicide rates at sub-national level. With the theoretical, methodological and empirical contribution of my research, I expect to depict a more complex relationship between social features and homicide.

My interest lies in explaining why in some forms of criminality (homicide) there is an overlap between the distribution of social and economical inequalities, some contextual characteristics, and the distribution of crime. In other words, why do some people or groups, who possess an unequal share of social and economical opportunities, also commit higher number of crimes? How is this similarity explained with the available sociological explanations of crime? And how can comparative methodology be used to extend or obtain a different perspective of the problem?

II. An Overview of the Relation between Economy and Crime

The explanation of deviant behaviour and crime based on economic conditions has been a long-lasting interest in the history of social thought. Before the appearance of the modern conception of social sciences in the 19th century, a proto-assertion about the relation between economic phenomena and deviancy was already present in social thought. The introduction of deviancy as a social relevant problem was a result of the industrialisation process of Western Europe in the 18th and 19th centuries. The drastic changes in social structure and economic production were accompanied by the rapid growth of urban centres, the rise of street criminality and the appearance of new "dangerous classes". These suboptimal products of industrialisation became the new subjects of study, as well as one of the first allusions connecting the effects of economic processes with deviancy and criminality. By the end of the 19th century, these first seeds made their way through the appearance of the modern notion of social sciences, and gained a definitive place in the forthcoming explanations of deviant behaviour and crime. In the crime research literature there is a consensus of opinion that the first works linking economy and crime were those of André-Michel Guerry's *Essai sur la statistique morale de la France* of 1833 and Adolphe Quetelet's *Sur l'homme et le développement de ses facultés, ou Essai de physique sociale* of 1835. These historic works, pillars of the positive school of criminology, represent the first application of the classical school of political economy as an explanation of crime.

The works of the positivist school were very sympathetic to the classical definitions of political economy. The classical idea encompassed a broad definition of the economy as economic interactions between individuals and the state, and the corresponding processes of production and distribution of economic goods. Based on this characterization of the economy, the 19th century worked with a particular rationale to explain the social and economic roots of crime: "[…] a law-like relation between economic and ecological factors and crime." (Taylor 1997:267)[7] This classical approach is the conceptual base of two methods of explaining the economy-crime relation: the economic cycle and the distribution of inequalities.

In the case of the economic cycle, its basic assumption is that the economy has cyclical phases of growth and decline. The relation with crime is rooted in the idea that the

[7] A tendency latter reinforced by the emergence of social and economic statistics: "[…] the nineteenth-century proliferation of interest in the reproduction of social and economic statistics also gave rise to a series of studies as to the relationship between the 'economic cycle' (which was now being understood, rather tentatively, as an inevitable aspect of industrial capitalist society) and rates of crime" Taylor, I. (1997). The Political Economy of Crime. The Oxford Handbook of Criminology M. Maguire, R. Morgan and R. Reiner. Oxford, Oxford University Press**:** 265-303, p. 267.

conditions of economic distress associated with economic downturn are positively linked with the increment of criminality. Within the idea of economic cycles there is also an association with the concept of economic development, where the main assumption is that positive indicators of economic development are linked to lower rates of crime. The relation between the different phases of the cycle and the variation in crime rates had been one of the most prolific ideas around which various studies of crime have been developed (Clinard 1978; Messner 1982; Kick and LaFree 1985; Neuman and Berger 1988). However, its actual presence has been diminished due to a lack of stronger empirical support.

The other side is represented by the concept of economic deprivation. The basic notion is that the economy generates structural differentiation in terms of access to economic opportunities. The association between deprivation and crime says that acute contexts of economic deprivation, absolute and relative, are positively affecting the increment in crime. Contrary to the economic cycle, the relation between an economy which systematically produces and distributes inequality and the variation of crime is still present as a fundamental explanation of economic influences on crime (Blau and Blau 1982; Archer and Gartner 1984; Messner and Golden 1992; Hsieh and Pugh 1993; Sampson, Wilson et al. 1995; Currie 1997; Taylor 1997; Kelly 2000; Albrecht 2001; Breen and Jonsson 2005; Neumayer 2005; Sampson 2008).

After the classical political economy, towards the end of the 19th century, economical thought underwent a radical change with the appearance of the neoclassical school, which modified the specification of the relation between crime and economy. The neoclassic economy replaced almost all the concepts derived from the political economy. It took the concepts of citizen and the state out of the picture and introduced an aseptic concept of the economy with a new focus on the individualistic approach to exchange. The economics of crime represented the displacement of former contextual elements of the economy, social, demographical and political, for the analysis of economical interactions between individuals. The influence of neoclassical economics has been strong and has reached a primordial place in actual research with the introduction of landmark concepts like control effectiveness, differential cost, deterrence, and rational choice (Becker 1968; Becker, Landes et al. 1974; Ehrlich 1974; Parker and Smith 1979; Eide, Aasness et al. 1994; Nagin 1998; McCarthy 2002).

The relationship between economy and crime has been specified according to which general conception of the economy has been adopted: political economy or neoclassical. Each one has

highlighted a particular feature of the economy or economical processes as a criminogenic factor: economic cycle and economic distribution for the perspectives influenced by the political economy; and economic rationality for the neoclassical explanation. In the specification and description of the processes responsible for the variation of crime, the three approaches contain a clear depiction of a positive and straightforward relation, where better economic conditions are associated with lower rates of deviant behaviour and criminality.

In contemporary theoretical debates and empirical research, however, there is evidence that the relation between economy and crime is more complex than a direct positive influence. An interesting example is the relation between social class and crime, found in nearly every economy based explanation of crime, where the almost common sense assumption dictates that crime is a social phenomena which takes place mainly in the lower and disadvantaged sectors of the social structure (Shaw and McKay 1942; Sutherland 1947; Cohen 1955; Merton 1968; Hirschi 1969). In other words, depreciated and harsh economic conditions engender increments of crime rates.

Nevertheless, this relation is far from being regarded as a constant in the study of crime. There are other almost classical studies (Tittle and villemez 1977; Tittle, Villemez et al. 1978) exploring the probable effects of economic status on crime, and their results have shown opposite relationships. Indeed these two works have revealed a marginal relationship between social class and crime. However, the lower social classes are not particularly prone to criminal behaviour because of some special characteristic. On the contrary, it was the criminal justice system that was eager to find or detect their criminals in the most disadvantaged classes; and that was the only true and stable relation between class and criminality. "[…] actors in the criminal justice system are more likely to arrest, prosecute, and convict individuals of lower socioeconomic status." (Crutchfield and Wadsworth 2004:70)

Works like Tittle's are a very good example of the complexity behind the economy-crime relationship, and a convincing call to think about the limits to which every explanation is bounded. In this chapter, I will try to identify those limits in the way in which the economy-crime relationship had been explained. There are various points to be treated: the differential effects of poverty on violent or property crimes; the difference between relative and absolute deprivation; and the variation in effects according to the size of the unit of analysis amongst others. Together with a critical review of the economic explanation of crime, I will concentrate my efforts to find a viable proposal to resolve some of the problems related to the economic conditions affecting crime.

II.1. The economics of crime and the rationality of criminals

The only perspective that can be vaguely classified as such, in virtue of its compactness and homogeneity, is the "economics of crime" or "crime economics". The appearance of this particular approach to crime is directly connected with the boom of three trends: the neoclassical economy, introducing the notions of *homo economicus* and microeconomics, methodological individualism,[8] and the adoption of rational choice methodology.

Basically, the economics of crime is a consequence of the boom of the neoclassical perspective in economic theory, and the further application of its methodology to the problem of crime in the social sciences. The influence of neoclassical economical thought represented the rejection of a broader conception of economical phenomena, as events inserted in a particular political economy structure. The neoclassical perspective turned the focus from structural and macro effects to the study of *homo economicus*. This change implied that in the mind of rational man, criminal conduct was no more a matter of socio-economical contexts. The notion of crime was redefined as a matter of pure economical rationality that is to say, the analysis of the costs and benefits of being engaged in criminal conduct.

The methodological framework of this perspective stands as a *sui generis* mixture of methodological individualism and atomism. The presuppositions of methodological individualism[9] are contained in the economic perspective in virtue of the relevance attributed to the actions of the individual as a viable explanation of criminal conduct. In the case of atomist methodology[10] its presence is also palpable in the separation of the original Weberian notion of *verstehen* in relation to a theory of action, and its replacement with a psychological theory of criminal conduct, by conceptualizing a homogeneous notion of individuals' preferences.

The mixture of methodological individualism and atomism represented the perfect basis for the assumptions of the rational choice, which definitely underpinned the development of the economics of crime. The secret of its future success was rooted on the achievement of significant levels of abstraction and formalization, through the usage of fewer assumptions and a reduced number of variables, making the explanation of crime more technically viable and parsimonious at the same time.

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[8] Or rather a particular mixture between methodological individualism and atomism

[9] The methodological individualism, whose intellectual roots are in Max Weber, identified the origin of social phenomena on the actions of society's members and that such actions can be explained by making reference to the intentional states that motivate the individual actors.

[10] There is a clear difference between the methodological individualism and an atomism. In order to explain social phenomena, for the former the unit or object of inquiry is the action of the individual and the social references that alimented their motivation to act, while the latter is more interested in the psychological motives of the individual. The first one is linked with a theory of social action, while the second could be related with behavioural theories.

The rationalistic approach to crime found fertile soil in the criminology and the sociology of crime because some basic understandings about the individual were already present. If we understand the rational choice approach as an explanation of the micro dimension of crime, not a theory of cognition, but a set of tools for the explanation of choices, at least the researchers and the public were already forewarned. The rational choice and some other theories like the control theories of crime[11] share a common ancestor in the classic utilitarianism of Jeremy Bentham, James Mill and specifically on the classic deterrence theory of Cesare Beccaria.[12]

The reception of the rationalistic approach in criminology had been specially greeted, but not exclusively, in Anglo-Saxon contexts. The recognized advantage of rational choice is the simplicity of its explicative ambitions, because its only concern is to analyse the consistency between peoples' preferences and choices. A second important advantage is that it does not need to deal with greater structures influencing the origin of preferences, because it is only interested on how preferences can influence choices. In other words, it represents a very practical methodological tool to gain knowledge about the way in which criminal decision making occurred.

The appearance of the rational approach in criminology made a substantial impact on crime research. The former perspectives based on the broader conception of political economy, the contextual analyses, and the etiological effects of some structural configurations, were almost replaced by the dwindling popularity of the notions of cost and deterrence. The theoretical foundations of the rational approach to crime are contained in two seminal works: Gary Becker *"Crime and Punishment: an Economic Approach"* (Becker 1968) and Isaac Ehrlich *"Participation in Illegitimate Activities: an Economic Analysis"* (Ehrlich 1974); and its guiding principles can be summed up in nine points.[13]

1. *Preferences*. One of the most important assumptions of the economic model is that the people have clear preferences for outcomes in the form of goods, services, states of being, etc.

[11] For example Paul Rock, in his review of the sociological theories of crime, defines the rational choice theory as one "increasingly important, but not indispensable foundation for control theories." Rock, P. (1997). Sociological Theories of Crime. The Oxford Handbook of Criminology. M. Maguire, R. Morgan and R. Reiner. Oxford, Oxford University Press**:** 233-264, p.243.

[12] It could be also possible to trace a connection between the positivist though of Lombroso and the rational choice, however, the influence of the "Lombrosian project" needs to be differentiated with caution, because his tradition persisted mainly in the form of a project pursuing the scientific study of the criminal inclinations of the individuals.

[13] Based on the classification made by McCarthy in McCarthy, B. (2002). "New Economics of Sociological Criminology." Annual Review of Sociology **28**(1): 417-442.

2. *Completeness, Transitivity and Stability*. Peoples' preferences have three basic properties: they are complete, transitive and stable. The notion of completeness means that people have the ability to order possible outcomes and combinations in accordance with their values. Transitivity means that the individual can show consistency for his preferences (if a person prefers A to B and B to C, he shall also prefer A over C). The stability assumption means that the preferences remain without change over time.

3. *Time discounting*. Preferences are influenced by the orientation to present versus future outcomes. This means that present preferences can be evaluated in relation with the possibility of acquiring higher future outcomes. In other words, a person will accept a present suboptimal outcome in order to achieve a more valuable outcome in the future.

4. *Attitudes towards risk and uncertainty*. Due to the uncertainty of the outcome, people show reluctance towards risk and uncertainty which influences their preferences. This relation is represented by the expected utility theorem of Neumann-Morgenstern (von Neumann and Morgenstern 1944) which is based on three elements:

1. Peoples' preferences are influenced by the potential and not by the assured outcomes, relative to its cost.
2. All the potential costs and benefits can be calculated using monetary values
3. Attitudes towards risk may not only influence preferences, but also the calculation of expected utility of an outcome.

5. *Incomplete information*. The fifth characteristic is the cost related to the information needed for decision making. The basic assumption is that the individual will always try to gather all the possible information to guide his decision, and although the collected information will always be insufficient, future choices will be made under the assumption that sufficient information has been gathered.

6. *Maximizing Utility*. Rational actions are the ones consistently applying these assumptions. However, the rationality of an action is not always consistent with utility maximization. Maximizing requires choosing behaviours consistent with one's expected utility function. In other words, it is impossible to determine the rationality of an action a priori, because to make such evaluation, all the former assumptions must be verified in the process of decision making. An identical situation may produce different results because of different calculations

of the former assumptions.[14] According to this idea there are two ways of rational calculation: a) self-interest - people pursuing their own economic interest, and b) present-aims standard where fewer assumptions about peoples' preferences allows the calculation of rationality with a broader number of interests (cultural, social, psychological, or emotional) and identifies rational conduct if it is calculated to meet individual's ordered preferences.

7. *Non-rationality*. The rational choice does not a priori deny the existence of non-rational decisions.[15]

8. *Analyzable*. Almost every choice can be examined with the instruments of decision and game theory.

9. *Not a cognitive theory.* Finally, the rational approach is not to be considered as an explanation of human cognition, but as a perspective trying to analyse peoples' decisions in view of the consistency between preferences, and the choices being made. It is more a methodological approach or analytical tool embracing stochastic processes than a theory of its own because "it contends that we can make useful predictions of human behaviour by assuming that most people act 'as if' they had made cost-benefit calculations." (McCarthy 2002:422)

Applied to the problem of crime, these assumptions represent the core of economic analysis, whose main proposal is that illegal conduct can be studied as the result of the cost-benefit calculation of an individual. From this point of view, criminal conduct can be analysed either from the self-interest or the present-aims standard. The former (Becker 1968) links the rationality of illegal conduct directly to their expected pay-offs, and its prediction is that: "[c]rime is reduced by reducing (*sic*) the monetary gains to crime or by increasing the probability or severity of [state] punishment." (McCarthy quoting (Schmidt and Witte 1984)) This idea is the most extended in the criminological research and is strongly represented by the deterrence and control theories of crime. On the contrary, the present-aims standard (Eide,

[14] "In addition, behaviours can only be described as rational for members of a group, collective, or population, if we can assume that most of these individuals have the same expected utility functions. The difficulty is in knowing people's preference orderings, knowledge, and approach to risk taking and time discounting prior to a decision. This difficulty encourages social scientists to deduce these from past actions, experimentation, or assumptions (e.g., Bentham's claim that pleasure and pain motivate people) and apply these to current and future decisions." Ibid. p. 421.

[15] for McCarthy the problem is that the economist are not very interested on developing the distinction between rational and irrational behaviour

Aasness et al. 1994) has not been widely applied due to inherent difficulties related to the acquisition of sufficient information to correctly assess the elements of the rational choice process (preferences, risk assessment, time, etc.), and then examine if the decision to offend is congruent with the prior elements. However, whether the "self-interest" or "present-aims" approach to rationality is taken, the general prediction of the rational approach remains based on a cost-benefit calculation.

Concerning the macro analysis of crime the prediction of the rational choice at macro level says in view that a crime can be observed as a decision that fulfils the criteria of a rationally structured choice, it is expected to find lower crime rates in units where the costs of crime and the potential risks of being caught are higher than their projected benefits. If the conditions of deterrence, commonly measured with incarceration rates, police activities and the strengthening of crime policy, are higher, independent of other macro-social processes, then crime rates will be lower.

The application of the assumptions of rational choice to the problem of crime depicts a strong methodological and technical perspective, more interested in the form in which individuals' preferences affect their actions (e.g. crime or illegal behaviour) than on the sources of them. The influence of the economics of crime over contemporary criminological research is not to be ignored, because it represents a significant change in the study of crime. Nonetheless, it also denotes an approach with very clear explanatory limits. There are numerous critiques illustrating the shortcomings of the analysis of crime through the glass of rationality (Nagin 1998), but the core arguments can be summed up in three points: first, its inappropriateness for the explanation of certain types of crimes like the instrumental and expressive motivated crimes; secondly, the incapacity of rational choice for the analysis of aggregate phenomena and the differential variation of crime rates like homicide; and finally its interest in methodological improvement through the development of technical aspects, but without the proper theoretical support.

Concerning the first point, the proponents of rational choice responded that a differentiation between types of crime, instrumental or expressive, is not only difficult to reach, but neither would it make much sense. From the rational choice point of view, the origin of preferences would not affect the rationality behind choices so that emotions are not independent from the schema of preferences and rational choice (Elster 1999). Nevertheless, the criminological research has shown that there is indeed a quantifiable difference between types of crime (property crime and expressive crime) and that such differential matters

(Kubrin 2003; Bijleveld and Smit 2006; Pizarro 2008). For the rational choice perspective this represents an important problem, because its actual stand has neither the theoretical readiness to include the differentiation between crimes, nor the methodological and technical flexibility to operationalize the problem.

Secondly, the performance of the rational approach in the empirical literature has not been very satisfactory, or is at least condensed into a very specific area of study or type of crime. For example, in a review of the cross-national research literature on crime rates from 1960 to 1990, LaFree (LaFree 1999) has found that in comparison with structural theories the deterrence perspective has not performed well at the aggregate level with homicide and property crimes. Another interesting example is Pratt and Cullen's meta-analysis of the empirical performance of indicators from several macro-theories of crime (1960-2004) (Pratt and Cullen 2005). The results confirmed the assertions made by LaFree; with the advantage that meta-analysis offers a more complete evaluation of indicators' strength and stability. The article showed again that the variables representing the hypotheses of the deterrence approach have not found much empirical support, and its explicative performance for aggregate phenomena is far from being satisfactorily, specifically in comparison with socio-structural explanations.

Finally, there is another problem, more connected with research practices than with theoretical arguments and empirical results. Many of the limits of rational choice can be defined as some kind of self-imposed limitations, derived from hard-nested practices in its research, and the fixation on the improvement of techniques and their application. A very clever and recent argument on this point is to be found in an article by Ted and Benjamin Goertzel (Goertzel and Goertzel 2008). The text contains various critiques about the style of research of the defendants of the economic perspective, but the central argument of the authors is that the actual research has become excessively interested in the development and application of more sophisticated econometrical techniques for the analysis of some "causal" relationship between deterrence and crime. The particularity of this tendency is that the excessive focus on techniques, mainly econometrical models, has neglected the theoretical argumentation that should be accompanying and, more importantly, guiding technical problems. This practice was previously identified not only in the literature on crime, but as a general symptom in the relation between social sciences and the statistical modelling of assessed relations between independent and dependent variables (Freedman 1991).

In sum, through lack of openness and flexibility to include new theoretical problems the economics of crime has been losing terrain in different areas of criminology and the

sociology of crime. This is particularly true for violent crime research, an area that has largely shown that its complexity, at different levels of observation, needs to be assessed in more innovative ways; aspects where the economics of crime has not revealed a lot of flexibility and interest. However, if the instruments and the arguments of this approach want to deal with this problem, a new position of dialogue with other perspectives and methodologies needs to be carried out.

II.2.The political economy of crime

As mentioned in the first section of the chapter, the explanations of crime based on a broader conception of the economy are a product of the influence of the classic concept of political economy in the explanations of crime. Their principal characteristic is that economical processes are intertwined in the social structure of society. For the explanation of the economic dimension of crime there are two ways in which this relation has been configured: from the perspective of economic cycles and from the perspective of economic development. Each one of them has specified a particular mechanism affecting the variation of criminality, and each of them has identified a specific economical feature as an independent variable for their explanation: unemployment in the case of economic cycle and indices of growth and wealth for economic development.

II.2.1. The economic cycle: unemployment

The identification of unemployment as a factor related to the variability of crime over time was a manifestation of the trend towards the recognition of links between crime and the economic cycle. Almost traditionally, unemployment has been adopted as one of the more illustrative indicators of the state of a national economy, and for the same reason it occupies an important place in the works studying the links between economy and crime. A review of the literature does not need to spend much time to detect that the unemployment-crime relationship has been filled to the brim with problems and contradictory findings rather than with solid arguments.

The study of the effects of unemployment on different forms of crime has been present in the specialized literature, particularly the American, since the late 1930s. As with other types of indicators of the economic cycle (e.g. inflation, GDP, industrial production, consumer price index), the study of unemployment and crime has set a wide palette of arguments. One of the most famous studies of the first half of the 21st century was Georg Rusche and Otto Kirchheimer's *Punishment and Social Structure* (Rusche and Kirchheimer

1939). Their focus, however, was directed towards the impact of the economic cycle on imprisonment. In their innovative comparative research between England, France, Germany and Italy, the authors found relationships between periods of economic recession and the increment of prisons' population. The central argument of their study is that when capitalistic societies enter into the recession phase, a considerable number of people will lose their jobs, drastically incrementing the unemployment rate. Subsequently and in response to the loss of economic sources, large sectors of society will be pushed to illegal activities to find the material resources that had been taken apart by the economic crisis, and therefore incrementing levels of incarceration.[16] Another form of explanation is that of Lessan (Lessan 1991) but with the mediation or influence of inflation as a factor limiting state's capacities to soften the distress caused by a period of crisis, worsening the effects of unemployment in incarceration.

Although a considerable number of works have found negative effects of unemployment in criminality, there is also other group showing that the effects of unemployment can be quite different. Taylor identified that one of the first studies (Taylor 1997) exploring the counterintuitive relation was the work of Wiers (Wiers 1945). Where, trying to explore the long-term relation between some economic conditions and the number of juvenile court cases of a county in Detroit, the author found a stronger relation with indicators measuring economic prosperity than distress. Nonetheless, the most famous study of this relation is the work of Cantor and Land *Unemployment and crime rates in the post World War II United States: A theoretical and empirical analysis* (Cantor and Land 1985). The basic theoretical argumentation of their text is that the effects of unemployment on crime can be analysed from a two-fold perspective: from their effects on motivation and from the variation of criminal opportunity. The model of Cantor and Land specifies that the effects of the variation of economic conditions, measured through unemployment, on crime are both negative and positive. Poor economic conditions help to decrease crime by incrementing people's guardianship of their properties, which is translated into a reduced number of criminal opportunities. Nonetheless, there is also a positive influence of economic hardship on crime by increasing the motivation toward criminal conducts in order to alleviate the economic situation.[17]

[16] The authors did not only post a direct relation between the changes in the economic cycle and crime. Their argument is also fuelled with a very clear critique of the capitalistic system of production and its necessity of chronic instability in the labour market.

[17] An interesting finding of this study is the form in which the effects of the fluctuations in the economy cycle are also affected by time lags, for example the effects on guardianship are present while the motivation effect is lagged in time.

The concept of the economy as business cycle affecting the variation of crime has also been present in the cross-national literature. However, because of the variability of its significance according to levels of observation, the indicator unemployment has not performed very well in comparative research. There is small support for unemployment as a relevant independent variable at national level. However, its significance in relation with crime tends to disappear across lower aggregation levels (Pratt and Cullen 2005).

By and large, the business cycle perspective, particularly the studies using measures of unemployment as proxy, has found some interesting obstacles and critiques to deal with. One important issue to resolve is connected with differential effects of unemployment if other socio-demographic variables are taken into account. Support for this idea comes from studies following the work of Blau & Blau (Blau and Blau 1982) and their application of decomodification indices. The basic scheme says that situations of economic distress (like unemployment) can only be criminogenic if they are associated with some element of social stratification like ethnical-group membership (for the case of USA). Following this idea, to find the criminogenic effects of unemployment we first need to identify the relevant stratification characteristic of a particular social unit.

Another important obstacle is related to the usage of unemployment as an indicator of different economical processes. As we saw, unemployment has mainly been used as an indicator for the economic cycle. However, its usage as a measure for other phenomena has been so extended that unemployment could be considered as a standard control variable of general economic aspects. With a fast review of the literature on crime research, it can easily be found that although unemployment is an often used indicator to assess the economic dimension of crime; its importance is not reflected in the same form in theoretical arguments. As a consequence, it has been used to measure relatively distant concepts like economic decline, labour market, deprivation, economic development and wealth. The principal problem with this almost indiscriminate application is two-fold: the poor empirical performance of the indicator, and the absence of theoretical arguments justifying both its usage and empirical failure.

There is another equally important problem that is not only limited to the usage of unemployment, but is a quite extended characteristic of theories trying to explain crime through economic indicators: the psychological fallacy (Sampson, Wilson et al. 1995). This idea refers to the connection between some economic phenomena or processes that happen at

macro or meso levels of observation, and are linked, through a not very solid argument, with outputs at the individual level like motivation or sentiments of frustration. Although, this is a problem that needs to be more extensively treated because it concerns various explanations of crime, I will bring forward some key points in relation to the business cycle and unemployment to grasp an idea of its general characteristics.

The association between economic conditions and individual psychological states connecting to crime has been a common practice in criminological literature. For example, in the research literature of the 1980s, particularly in the American context, this type of association was very common when using psychological-theory-laden terms like social pathology: "The term social pathology encompasses a number of conditions that are harmful to individuals, societies, or both including psychological distress, more severe disturbances -such as psychoses, suicide, and alcoholism- and crimes against persons and property." (Horwitz 1984:96) The focus was on the connection between some economic condition like economic status, economic decline, -measured using unemployment, or economic inequality as the causes of psychological states favourable to social pathologies or criminal conduct.

Complications appeared when these relationships were applied to empirical research, where the results showed a lack of consistency. If unemployment is inserted as an independent variable, the empirical results are not very homogeneous. When a correlation between unemployment and social pathology or criminal behaviour exists, it is quite small and with different effects according to factors like level of observation, research design and types of crime. These types of variation in the empirical research are a clear call to rethink the theoretical arguments behind the usage of economic indicators like unemployment, in order to obtain a more precise reassessment of the conceptualisation behind economy and crime. The following extract of a text by Horwitz exemplifies quite clearly this problem:

> "Despite the knowledge provided by recent research, much remains unknown. We know little about the specific ways in which the economy produces pathology or about how individuals protect themselves against economic deprivation. Nor can we specify the comparative power of different types of deprivation--poverty, economic decline, unemployment, inflation-in producing pathology. An additional limitation is that most research to date centres around a particular outcome such as psychological distress, suicide, or crime. As a result, we do not know why different people develop different responses to economic distress--why some become distressed or commit suicide, while others develop physical illnesses or why some commit crimes, as others slip into apathy or revolt. […] What is needed in this entire field is overarching theory that would guide empirical inquiry beyond the present jumble of empirical findings." (Horwitz 1984:114)

Finally, the question of what kind of behavioural outcomes are correlated with economic conditions, -like unemployment, remains an open issue for the theoretical and empirical literature. Although, there is evidence for the existence of an economic dimension of crime, the extrapolation of economic variables to the emergence of psychological states, which turn out to be probabilistically associated with illegal or criminal conducts, is still contested.

II.2.2. Economic development

One of the most abiding assumptions about the relationship between economy and crime can be labelled as the economic development hypothesis. Its core assumption is based on the idea that stable and long-term economic development produces conditions that, in the long term, generate material wealth and improved living conditions, which turn out to be associated with lower rates of criminality. This almost common sense association has roots not only in the classical schema of political economy but also in the modernist thought in sociology.

The label modernist depicts a group of explanations adopting a long-term view of social processes as phases of progressive social development. Inside the corpus of these theories it is common to find the usage of concepts like progress, development, modernization and urbanization. Their intellectual roots are located in the philosophical and social thought of the European Enlightenment, and their ideas are based on the prolific couple of providence and progress (Frankel 1948; Sampson 1956). The influence of the Enlightenment in the history of sociological theory is very wide and it can be found in different types of sociological explanations. However, concerning the relation between development (economic or social) and deviant behaviour, two important representatives of this idea are Emile Durkheim and Norbert Elias.

To talk about how the economic development-crime relationship has been influenced by Durkheim and Elias, it is necessary to identify three slightly different ideas on how social development influences the variation in deviant behaviour. In the case of Durkheim, two are the hypotheses that have guided the study of the effects of economic development on the variation of crime. First, there is a depiction of the increment of crime rates in periods of economic development and the rapid social changes brought by them. The causal argumentation is that acute modifications on the economic structure, like the ones provoked by the industrialization process, are accompanied by a breakdown in the axes of social regulation and social integration, which directly induces higher crime rates (Shaw and McKay 1942; Clinard 1964; Krohn 1978; Leavitt 1992; Ortega, Corzine et al. 1992). The second hypothesis derived from Durkheim sees economic development as a decisive factor for the

generation and increment of both moral individualism and organic solidarity, which in turn helps to increase the societal control of criminality (Messner 1982; De 1995; Huang 1995).

In the case of Norbert Elias the hypothesis applied to the analysis of crime has been extracted from his two principal works: *The Civilization Process* (1939) (Elias 1994) and *The Court Society* (1969) (Elias 1983). His idea of civilizing process was created to explore the links between long-term social processes and changes in psychological attributes and modes of behaviour. Elias produced two principal findings: first, through the centuries there has been a palpable change in the personality of individuals in the form of an increment of self-control; and second, the emergence of external social control by the formation of national states and the monopolization of centralised power and violence in the hands of the state. The corollary of these long-term macro social processes in the psychological configuration of the individual is the gradual pacification of everyday interaction and the decline of violent behaviour. The work of Elias served as theoretical support for much of the forthcoming works trying to explain the historical variation of levels of aggression in Western societies, in other words, the long-term development of societal violence and its relationship with large-scale social processes.

One of the most important representatives of this line of investigation on the history of crime is Ted Robert Gurr. With his article on the *Historical Trends on Violent Crime: a Critical Review of the Evidence* (Gurr 1981) followed by the publication of *Violence in America* (Gurr 1989) Gurr made an appealing examination of the secular trends of lethal violence in the Western world from the 13th century to the 20th century. His main discovery was the existence of an S shaped curve depicting the development of lethal violence rates. His analysis was the empirical verification of the constant decline of levels of violence and aggression in Western societies: from estimated rates of 20 homicides per 100,000 persons in the high Middle Ages to approximately 1 per 100,000 persons in the 20th century. Gurr, very close to the theory of Elias, explained this trend as the product of increasing sensitization of societies to violence and the corresponding increment of internal and external control of aggressiveness.

Economic development has been also used in non-historical research of crime and deviant behaviour. This application is closer to Durkheim's perspective and is better known as the modernization or the social development explanation of crime. There is a small debate (Messner 1982; Dicristina 2004; DiCristina 2006) on whether Durkheim's two hypotheses are based on developmental explanations, containing a progressive or evolutionary perspective of

society, or on the notions of differentiation, interdependency and complexity. Yet, the most common applications of Durkheim's hypotheses are clearly based on a developmental conception of societies where growth, in terms of wealth and better living conditions, in Western societies should be accompanied with the homogenisation of lower crime rates.

The empirical research on this perspective has been focusing even more on economic measures as proxies or indicators of societal development, making use of various measures of material and economic context like: GNP/GDP; media communications; energy consumption; distribution of employment; infant mortality; and unemployment. There are several works using this type of economic characteristics as aspects of social development and modernization[18] where the latter is understood as: "…the modernization of nations should be positively associated with property crime and negatively associated with violent crime. In the modernization perspective, all nations go through the same developmental stages and the same changes in crime patterns. The changes that have occurred in developed nations are proposed as a model for the relationship between development and crime for all nations. The forces of modernization such as industrialization and urbanization are proposed to explain more about crime than the unique features of individual nations."[19] (Neapolitan 2003:78)

The usage of economic development as an indicator of modernization and societal development is plagued with some critical points, showing that economic development implies a reduced and limited depiction of the economic dimension of crime. The first remark is that economic development has been more frequently used as an economic characteristic *per se*, in the sense that the traditional link with the theories born from Elias and Durkheim has been constantly loosening, making of economic development a kind of economic indicator and not a component of a sociological or criminological theory.

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[18] For extensive reviews of this perspective see Shelley, L. I. (1981). Crime and modernization : the impact of industrialization and urbanization on crime. Carbondale, Southern Illinois University Press, LaFree, G. and E. Kick (1986). "Cross-national effects of developmental, distributional, and demographic variables on crime: A review and analysis." International Annals of Criminology **24**: 269-295, Messner, S. F. (2003). Understanding Cross-National Variation in Criminal Violence. International Handbook of Violence Research W. Heitmeyer and J. Hagan. Dordrecht ; Boston, Kluwer Academic Publishers**:** 701-716.

[19] Some good examples of this idea are Shelley, L. I. (1981). Crime and modernization : the impact of industrialization and urbanization on crime. Carbondale, Southern Illinois University Press, LaFree, G. and E. Kick (1986). "Cross-national effects of developmental, distributional, and demographic variables on crime: A review and analysis." International Annals of Criminology **24**: 269-295, Heiland, H. and L. Shelley (1992). Civilization, modernization and the development of crime control Crime and control in comparative perspectives. H. Heiland, L. Shelley and H. Katoh. New York Walter de Gruyter**:** 1-19, De, L. (1995). "Economic Development, Social Control, and Murder Rates: A Cross-National Approach." Cross-Cultural Research **29**(4): 361-382, Neapolitan, J. L. (1997). Cross-national crime : a research review and sourcebook. Westport, Conn., Greenwood Press, Moniruzzaman, S. and R. Andersson (2005). "Age- and sex-specific analysis of homicide mortality as a function of economic development: A cross-national comparison." Scandinavian Journal of Public Health **33**(6): 464 - 471.

Most of the works using economic development have difficulties in finding homogeneous empirical results. The relationships between the indicators used to measure economic development and property and violent crime rates are very heterogeneous in the empirical literature, making it difficult to identify generalities in the relationship. Good examples are the works using measures of material wealth to catch modifications in economic development (De 1995). There the relationship with the variation of crime rates is very flexible according to the intervention of different kinds of mediation factors like the economic status of particular ethnic groups. For the theory behind economic development, irregularities and unexpected connections like these are particularly difficult to integrate in its schema.

This heterogeneity introduces an important difficulty grade in making generalizations. For example, there are countries where, according to one measure of economic development, higher levels of wealth are accompanied with lower rates of crime. However, there is also evidence of the inverse relationship, meaning higher levels of development with high rates of criminal violence. That is the case of some highly developed nations, depending on how economic development is measured, like the USA. Or in the European context where traditionally strong economies with higher levels of economic development are also showing high rates of violent crime for the European standard such as can be seen in the case of Finland.

In the comparative perspective (Neuman and Berger 1988; Neapolitan 2003) the panorama is even more complicated. Simple or traditional concepts and measures of economic development have numerous problems to grasp the economic and social intricacies of contemporary Western and non-Western- societies, where the intertwining of different relevant factors is so intense that the use of a one-dimensional and straight-forward concept of economic development based on material wealth will not get us further with the explanation of crime:

"Ted Gurr and his associates (1977) have conducted ambitious comparative and historical studies of economic cycles and crime rates in nineteenth and twentieth century London, Stockholm, Sydney, and Calcutta, adding historical specificity to studies of crime rates trends. Their findings suggest that economic conditions in all three Western cities were inversely related to crime rates in the second half of the nineteenth century, as well as in the early decades of the twentieth. Since about 1920, however, the increase in total wealth in each of these three cities has been directly related to rising crime rates. In the earlier period, absolute economic deprivation is the major generator of crime, while in the latter, it is increasing prosperity. The data cannot indicate, however, whether the increases in the latter period are due, to a greater opportunity to commit crimes or to growing levels of relative deprivation among lower-status persons. There were no similarities between crime rates in Calcutta and those in the three Western cities." (Horwitz 1984:106)

II.3. Economic deprivation

In both the sociological and criminological literature, the concept of deprivation has been extensively and successfully used for the explanation of the economic dimension of crime. One of the reasons for its success is that deprivation entails structural processes in the economy which are directly or indirectly affecting the variation of criminality through the depletion of well-being conditions of persons, groups, communities, cities and nations. The Oxford Dictionary defines it as: "The action of depriving or fact of being deprived; the taking away *of* anything enjoyed; dispossession, loss. The action of depriving any one of an office, dignity, or benefice; dispossession, deposition."[20][21] For the explanation of the economic dimension of crime, deprivation is understood in terms of the loss of material conditions of well-being, and both its appearance and permanence are viewed as severe criminogenic factors.

The connection between economic deprivation and crime has been explained through the effects engendered by the individual experience of deprivation. The literature has identified two different forms of experiencing the loss of economic well-being, and therefore two alleged different mechanisms connecting deprivation and crime namely: absolute and relative deprivation. Usually, absolute deprivation depicts the hardest level of economic distress, where the permanent absence of economic wealth increases differences between economic classes. The most common measure of absolute deprivation is poverty, and the experience of poverty is regarded as criminogenic because the permanent lack of economic resources is presumed to lead individuals to illegal conduct in order to find the means of survival. On the other hand, relative deprivation is not based on economic stratification processes, but on the differential access of social sectors or groups to economic opportunities. When the perceived differential access is too big, the experience of relative deprivation, a process of social comparison with other groups or persons, engenders sentiments of frustration that tend to be canalized through aggression and illegal behaviour. In the empirical research the common proxy for relative deprivation are income-based indicators like the inequality of income distribution.

With these characteristics in mind, this section will review the arguments connecting the two types of economic deprivation with the variation of crime. The objective is the identification of their weak points and the arguments that need to be redefined or redesigned

[20]http://dictionary.oed.com/cgi/entry/50061381?single=1&query_type=word&queryword=deprivation&first=1&max_to_show=10

[21] Even in the British National Corpus, the common usage of the term makes reference to the act of dispossession, lost, destitution of something fundamental for the fulfilment of basic needs, at physical, social and material level.

in order to propose a more solid alternative to explain the criminogenic characteristics of economic deprivation at aggregate level.

II.3.1. Absolute deprivation: poverty

The relationship between absolute deprivation and crime has been a continuing presence in the literature. This particular type of economic deprivation has been related in different forms with the variation of crime rates. Poverty, the most used indicator of absolute deprivation, is regarded as a factor influencing the incidence of crime as an enduring source of motivation to commit crime. The question about how this motivation comes to be realized into criminal acts has different answers. A first type is represented by a set of explanations before the 70s. First we have the conflict theories (Vold 1958; Quinney 1969; Quinney 1970), which see capitalist economies as chronically dispossessing low-classes of the necessary means for survival, incrementing frictions between classes, and fostering illegal behaviour as an expression of this lasting discontent. Secondly, and closely related to the conflict approach, the anomie perspective of Merton (Merton 1968) identified the path to deviant behaviour as going through feelings of frustration, produced by the tension between the absence of economic opportunities, conditions of poverty, and the cultural values of economic success. In third place we have the subcultural explanations were the experience of poverty generates the appearance of values favourable to violence and illegality. It is a combination that in the presence of illegal opportunities will "push" the individual to try to alleviate his situation of economic stress through illegal conduct (Cloward and Ohlin 1960). In fourth place we have the social control theory (Hirschi 1969), which defends the assumption that deprived lower classes are not prone to conformity with the moral values that could discourage delinquent conducts.[22]

After the 70s the link between poverty and crime was subjected to a reformulation attempt. The objective was not only to resolve the aspects pointed out by critics, but also to include a wider conception of the link as a social process going beyond the personal experience of poverty. Two critical issues emerged (Crutchfield and Wadsworth 2004): the differential effects of absolute and relative poverty (Blau and Blau 1982; Messner 1982; Williams 1984); and the effects of poverty in combination with processes of stratification and

[22] These ideas received several critiques in the late 70s because of important weaknesses in their empirical, theoretical and methodological aspects: the poverty-crime relation as a bias of the system of justice Tittle, C. R., W. J. Villemez, et al. (1978). "The Myth of Social Class and Criminality: An Empirical Assessment of the Empirical Evidence." American Sociological Review **43**(5): 643-656.; and the differential effects of poverty according to type of crime Elliott, D. S., D. Huizinga, et al. (1985). Explaining delinquency and drug use. Beverly Hills, Calif., Sage Publications. to name a few.

inequality in particularly disadvantaged sectors of society (Wilson 1987; Anderson 1999). The answer was directed to the diversification of the scope of the research, in order to include the effects that other economic and social processes in combination with poverty could have in the generation of social contexts with a higher incidence of crime rates. In general this broader response encompasses a combination of both structural arguments, with the inclusion of poverty, inequality and stratification, and cultural arguments, the appearance of crime and violence supportive values. With this step, the emphasis changed from the normative, cultural and behavioural configurations as adaptive solutions, to stable and long-term situations of deprivation, as a condition for a higher probability of being part of violent and/or criminal conducts e.g. (Wilson 1987; Hagan 1993; Hagan and Peterson 1995; Short 1997; Anderson 1999; Peterson, Krivo et al. 2000; Peterson and Krivo 2005).

However, this more comprehensive approximation can be hardly considered as the new standard on the explanation of absolute deprivation and crime. Although this wider approach has been reproduced in various books and journal articles, there is a considerable number of works that are still using the former and simplified versions of the relation between poverty and crime from a common point: the individual experience of poverty as a factor generating particular sentiments of frustration that, through different mechanisms, tend to induce increased rates of crime. It is precisely this commonality where several theoretical and empirical problems also come to light, particularly through the question of why and how a structural characteristic should determine or influence individuals' motivation to commit crime?

One of the most cited flaws of the theoretical argument lays on the specification of the causal mechanism linking poverty and crime. The great majority of works dealing with the economic dimension of crime vary from a confirmative position of the effects of absolute deprivation to their negation. Normally, these discrepancies are grounded on empirical and methodological problems; however, this is more a theoretical issue than anything else. The connection between poverty and crime implies an unavoidable gap between the two extremes of the equation. The breach is represented by the experience of deprivation which is the basis of the poverty-crime relationship.

This strong reliance on the effects of structural processes on an individual's personality is another example of the psychological fallacy of the economic dimension of crime. The psychological fallacy happens when in an observed covariance between the independent variable *A* (structural process/poverty) and the dependent variable *C* (crime rate), is assumed that *A* is responsible for the outcome *C* because of the existence of an element *b*

(experience of poverty or sentiments of frustration) which is adopted as the missing link. It turns problematic to follow this logic because it is questionable to predict a particular state of mind from a structural characteristic, and it is even riskier to forecast an aggregate outcome form the same unproven psychological effect.

However, this does not mean that the experience of absolute deprivation would not generate psychological states of distress which can be conducive to aggression and other violent behaviour. The problem is that by explaining an aggregate outcome using a mental process we are losing the sociological perspective. The clarification of an aggregate outcome as a result of a social process cannot go through the individual's sphere and its psychological processes. Individual characteristics cannot be simply aggregated or directly extrapolated as the particularities of an individual could also comply with the characteristics of a community or even a group of people. To improve the explanation of the effects of poverty in aggregate units of analysis it is necessary to leave aside the psychological-based explanations and to try to find the social processes triggered by the variation and concentration of absolute deprivation in a social unit, which could be related to the corresponding variation of crime rates in the same social unit.

The presence of the psychological fallacy and the absence of other social processes which may influence, determine, mediate or even counteract the effects of an economical structural process like poverty, generates a great deal of confusion and ambivalence at the empirical level. By reviewing the most cited references, it is difficult to make a clear statement about the poverty-crime link. The main problem comes from the notorious absence of a mass of empirical evidence not only on the directionality and intensity, but also on the existence of a significant relationship. For example, there are studies conceding empirical support: (Messner 1982; Messner, Rosenfeld et al. 1999; Pridemore 2002; Kim and Pridemore 2005; Pratt and Cullen 2005; Pridemore 2008). While there are also other examples not supporting the relation (Blau and Blau 1982; Messner and Rosenfeld 1997; LaFree 1999); and there are studies which found "relative" effects mediated by intertwined interactions with other elements (Archer and Gartner 1984; Sampson, Wilson et al. 1995; Short 1997; Anderson 1999; Beeghley 2003).[23]

With such a panorama in the empirical evidence, theoretical arguments of any kind are confronted with considerable difficulties. The literature has identified different factors

[23] The most common indicators or components of poverty used to test the relationship absolute deprivation-crime are: median income, percentage of families below the poverty line, index of income inequality, percentage of blacks, and percentage of single parent families. Land, K. C., P. L. McCall, et al. (1990). "Structural Covariates of Homicide Rates: Are There Any Invariances Across Time and Social Space?" The American Journal of Sociology **95**(4): 922-963.

responsible for the empirical flaws and the most cited error accountable for these discrepancies is the disparity between the definitions of poverty and their indicators; in other words, the increasing divergence between definitions and the components of poverty. For example, poverty can be defined using consumption, income or non-income definitions and their corresponding indicators like income, expenditure and well-being indicators, life expectancy, education and standard of living among others. A good example is the case made by Pridemore (Pridemore 2002), by identifying a series of inconsistencies present in the research literature, between the definition of poverty (e.g. income-based) and the usage of inadequate empirical indicators for such a definition (e.g. GDP).

Another particularly interesting puzzle in the link between poverty and crime is the heterogeneous effect of poverty according to factors like type of crime and level of observation. The literature has already identified that the effects of poverty might differ according to the type of crime. For example, the effect of absolute deprivation is higher for property crimes than for violent crimes where it sometimes tends towards a negative correlation (Kelly 2000; Neckerman and Torche 2007). Concerning the level of observation, Pridemore (Pridemore 2008) accounted in a later text for the peculiar divergences between the effects of poverty and the type of aggregate unit used. He observed a variation from a more stable association between poverty and homicide at the community level, to a weak relation or a completely different one (e.g. income inequality-homicide) at the national level. The paradigmatic case is the absence of significance of poverty as an indicator in the USA at national level, compared with the stronger covariance at the cross-sectional level.[24] This problem also exists at the cross-national level. In the fewer comparative studies of crime at cross-national level, it is common to find a covariance between poverty and rates of property and violent crime, meaning that poor countries have favourable contexts for higher crime rates. Curiously, this finding is not to be found with the same clarity with smaller units of analysis like cities, counties or communities. Different reasons had been suggested to explain these differences, ranging from the type of definition and indicator used, to the idea that the relationships between economic variables and crime are of a changing nature, to the size of unit of analysis and some contextual particularities that may counter the effects of absolute deprivation; however, this issue remains quite unexplored.

[24] Pridemore affirms that the principal reason of this difference is the quality of the data available in the US to measure poverty at different levels of observation. One of the most used and reliable indicators for the measure of poverty in the USA based research is infant mortality.

It is definitive that absolute deprivation is an important factor affecting the variation of crime rates but this relationship has not yet been clearly explained, although it has been a long standing presence in the literature. One probable reason for this weakness is the form in which the effects of economic processes have been conceptualized in the theory. Generally speaking, the research on crime has quite closely adopted the changes made in the relationship between economic phenomena and society. Apparently, the study of crime as a social phenomenon made a quite good follow up for the change of scope from the wider and more comprehensive tradition of political economy, to the more focused field of the neo-classical approaches. However, while newer perspectives appeared, re-assessing economic processes in their relationships with other sociological variables (e.g. neo-institutional approach), crime research, with some exceptions, remained fixated with the specification of economic effects as if it where operating free from other influences. In a great part of the actual research, this is precisely the most sensitive absence. It is of great importance to define and make conjectures about the particular effects that absolute deprivation could have, but it is also necessary to leave space for the possibility that such effects may be, to some extent, mediated by other socio-economic variables, and considering that such interaction can also take a particular form according to the characteristics of the unit of analysis.

To analyse the differentiated effects of a set of independent variables in a social unit with some specific characteristics it may help to include questions related to how the pervasive effects of, for example, different dimensions of deprivation or/and other economical processes, are modifying social units, and affecting the variation of crime. If we consider that to live in conditions of absolute deprivation affects the psychological states of individuals, but also that those individuals are living in a particular urban or rural area, and are part of a social or ethnic group, we should also ask if these social characteristics are influencing (mediation) the link between poverty and crime. If this idea is correct and if theoretical arguments can be specified to justify the general hypotheses that economic conditions like poverty indeed have effects on the variation in crime, but that such effects fluctuate according to the characteristics of social units, it could imply a possible solution for some of the existent theoretical insufficiencies. It may represent a different approach to resolve, or explain, the heterogeneity of the link between poverty and crime, a way of reformulating its empirical problems, and possibly a viable solution.

In this review of the different arguments, criticisms and problems related to the link between absolute deprivation and crime, it has been made clear that it is an interesting and still

contested relationship waiting to be satisfactorily explained at both theoretical and empirical level. The status of poverty as an important aspect for the explanation of crime is quite unconventional. It has become an almost common sense association, where no one would doubt that to live in poverty is a criminogenic condition, however, the difficulties emerge when a concise explanation of the link and the corresponding empirical test is needed.

Nonetheless, as we have seen in the reviews of other components of the economic dimension of crime, these difficulties are more a common characteristic than an exception. The balance between satisfying theoretical arguments with the corresponding empirical support is a rare circumstance in the economic dimension of crime, particularly but not exclusively at aggregate levels. For this reason, I will not go further with a more detailed revision of other theoretical and empirical problems of absolute deprivation, because for the case of relative deprivation we will find very similar inconveniences concerning theory and empirical testing. Nevertheless, toward the conclusions of this chapter I will come back to the issue in order to get a clearer picture of the limitations concerning the economic dimension of crime and how it can be minimized.

II.3.2. Relative deprivation: inequality

"[…] the liberal goal that a person's chances to get ahead (attain an education, get a good job) should be unrelated to ascribed characteristics such as race, sex, or class (or socioeconomic) origin."
(Breen and Jonsson 2005:223)

Relative deprivation[25] is based on the idea that the experience of being economically deprived is going to be different when a process of comparison between groups takes place. The source of this contrast is a striking variation in the access to economic opportunities between social sectors. This gap in the distribution of opportunities is then the principal cause for the appearance of sentiments of injustice, frustration and hostility. In comparison with poverty as the primordial indicator of absolute deprivation, measures of economic inequality are the typical empirical reference of relative deprivation. Generally speaking: "in the social sciences, concerns about socioeconomic inequality focus on the consequences of the hierarchical differentiation of attributes. Inequality implies that social categories and groups of persons are ranked and ordered in relation to one another, and that categories of individuals are socially stratified into superordinate and subordinate groups" (Hagan and Peterson 1995:2).

[25] The first usage of the term associated with social conducts and phenomena was in *The American Soldier* by Samuel Stouffer Stouffer, S. A. (1949). The American Soldier. Princeton,, Princeton University Press..

Given that relative deprivation is conceived as a different concept from absolute deprivation, the answers about how inequality could affect the variation of crime are also dissimilar. For the case of violent crime, the connection is commonly assessed using three arguments: 1) the experience of relative deprivation engenders sentiments of frustration which in turn affect interpersonal relations, particularly inside the family; 2) to live in relative deprivation nourishes the creation of a sub-culture of hostility, which is normally directed towards relatives or is adapted to the small urban context in the form of the "code of the street" (Anderson 1999); 3) in contexts with high degrees of economic deprivation, where the difference between rich and poor is big, there is an increment in criminal opportunities because the probable targets are more visible due to pervasive inequality.[26]

These three arguments on the effects of economic inequality on crime are strongly based on the experience of relative deprivation as a sufficient factor for the emergence of criminal conducts.[27] As in the case of the link between poverty and crime, inequality needs a catalyst to become criminogenic: sentiments of frustration and hostility. As a consequence, we have two problems concerning economic inequality: first, inferring individual psychological states from macro social characteristics (King, Keohane et al. 1994), and the absence of data to achieve a satisfactory test of neither the individual processes (frustration, hostility) nor the macro elements of the relation (Chamlin and Cochran 2006).

Relative deprivation is also connected with some definitional problems commonly found in the studies using inequality as an economic indicator. It is usual to find semantic problems concerning the difference between poverty and inequality. While there are works recognizing the differences between the concepts and their criminogenic effects (Williams 1984; Short 1997; Kubrin 2003), there are also interesting examples where inequality is often regarded as a dimension of poverty (Krohn 1978; Krahn, Hartnagel et al. 1986). This is based on the idea that poverty is a period of economic adversity which can be experienced in two mutually exclusive ways namely, the absolute and the relative experience of poverty. The absolute experience of poverty is centred on the constant and absolute deterioration of

[26] There is a slightly difference with the classification of Neckerman and Torche Neckerman, K. M. and F. Torche (2007). "Inequality: Causes and Consequences." Annual Review of Sociology **33**(1): 335-357. of the three different ways in which inequality is connected with crime: 1) the economic explanation Kelly, M. (2000). "Inequality and Crime." The Review of Economics and Statistics **82**(4): 530-539. where the economic harshness or distress caused by economic inequality is incrementing the calculated or expected returns of criminality; 2) the social psychological perspective which illustrates the crimiogenic effect of the sentiments of frustration and hostility engendered by the perceptions of relative deprivation; 3) the social disorganization where communal characteristics like social capital and collective efficacy are rendered as mediators of the effects of economic inequality.

[27] Although in different forms, the three explanations (the structural, cultural and the rational-materialistic) underline the importance of the psychological effects of inequality to indicate the crimiogenic characteristics of relative deprivation.

fundamental material conditions, while relative poverty depends on the existence of a predefined threshold, poverty line or income level, to illustrate the absence of economic opportunities and resources in comparison with other sectors of society.

Connected with the semantics issue, there are also substantive problems concerning the operationalization of inequality particularly with the type of empirical references connected with the concept. The standard procedure is to define inequality from an income distribution perspective, as a depiction of the disproportional access to economic opportunities between persons or groups. Nevertheless, there are other versions where the measure of inequality is based on the idea that the differences in the distribution of wealth are a better illustration of the extent of inequality than income distribution (Neckerman and Torche 2007; Cagetti and De Nardi 2008).

Although these two are important problems, the most relevant issue is the weight of experience inside the concept of inequality, because the connections with crime are being established through elements pertaining to the psychological sphere. The basic definition of relative deprivation is closely connected with the experience of being deprived, which in turn implies the existence of a social comparison process as the necessary, almost sufficient, condition for the occurrence of relative inequality. Coming from the experience of deprivation, two mechanisms confer relative deprivation its criminogenic characteristics. First, relative deprivation generates sentiments of frustration and hostility which in turn directly alter the way in which interpersonal interactions take place, as well as increasing the probability of violence. The second mechanism stresses the increased probability of materially motivated crimes, by intensifying the motivation to commit crimes due to the increased availability of targets and the alteration of the expected returns due to economic harshness.

This relation also concedes a great deal of importance to the experience factor, because social comparison needs to take place in order to reaffirm sentiments of injustice which in turn are altering the calculation of expected returns. In other words, for the first mechanism the direct experience of relative deprivation generates strong sentiments of frustration and hostility that can produce violent outcomes. For the latter, the stress is again located on the experience of deprivation but in this case its consequences are the modification of the rational calculation behind criminal behaviour. Whether due to sentiments of frustration and hostility, or increased rational-economic motivation, almost all the weight of the explanation lays on the experience of being deprived. Although compelling, this extreme reliance on micro social processes diminishes the influence of other macro factors.

The explanation of economic effects based on experience precludes the presence of elements like: time, space and mediation. For example, in the available explanations using relative deprivation there are no questions about how differentials in the intensity of relative deprivation can also provoke different criminogenic outcomes. So as a differential in the experience of deprivation is possible to conceive, according to individual characteristics, it should also be possible to conceptualize differentials in the material dimension of inequality. In a material dimension, elements like time (long-term deprivation versus short-term), and space (the concentration of deprivation in areas with particular socio-demographic characteristics) can contribute to modify the way in which economic inequality is related to crime. The same can be said for the possibility of mediation between variables, which under the actual schema, cannot be assessed as part of a macro explanation of criminal rates.

In view of these problems, it is possible to maintain the link between inequality and crime without recurring to inferences based on the appearance of frustration or hostility? Instead, it may be possible to include questions about the patterns of distribution of inequality according to socio-demographical characteristics.

A compelling alternative is contained in the work of Judith R. Blau and Peter M. Blau. Their work is both an important starting-point and an illustrative example for the study of crime, particularly on how economic processes, like relative deprivation, are linked with social stratification. Often regarded as a reformulation of some classical elements contained in the latter versions of the anomie-strain theory (Merton 1938) and Marxist theory,[28] their work represented the enhancement of understanding about how the interactions between economic and social processes influence the variation of crime. This relatively new trend in crime research began in the 1980s with the appearance of the article *The Cost of Inequality: Metropolitan Structure and Violent Crime*. (Blau and Blau 1982) The article represented a significant change in the relationship between inequality and crime in view of other variables. The new element was the association between the distribution of inequality and the ascription to a particular ethnic group. The principal implication of this approach stated that inequality effects on crime are better assessed when studied as race-ascribed inequality, because economic inequality, particularly, but not exclusively in the USA, is not randomly distributed.

Blau's work also represented a reinforcement of the sociological view of the explanation of crime. Their perspective was not only focused on processes like the modification of internal controls or the weaker assimilation of values and norms. Their central

[28] Both in Marxist theory and in the classical article of Merton it is present a clear depiction of the criminogenic characteristics of inequality regardless of other socio-demographic characteristics.

point of interest was to what extent these social processes generated by economic inequality were stronger with the appearance of ascribed economic inequalities.

The argument behind the criminogenic effects of ascribed inequality is heavily based on the idea that in Western democratic societies, embracing the ideals of legality and equality, economic inequality will be recognized as unjust. And when these inequalities increase, as a result of membership to a particular racial or ethnical group, the perception of injustice will be not only stronger, it will also generate "alienation, despair and conflict." (Blau and Blau 1982:126) This form of inequality is a proper context for the continuous appearance of interpersonal conflicts with a higher probability of ending in acts of criminal violence. In this case, the effects of ascribed inequalities are not directed to the individual but toward the aggregate level by the undermining of social interaction, the appearance of social disorganization, underlying animosities, and disorientation in the form of non-regulation of passions and lack of integration of values and norms (Blau and Blau 1982).

The idea of ascribed inequality highlights a process that has been in a state of latency for a long time, namely the mechanisms behind the distribution and variation of crime rates are not susceptible to a one-sided explanation, where only a set of economic indicators are entitled to account for the whole variation. Blaus' work gives even more coherence to the argument and empirical support to the idea that it is not possible to think about an "economic explanation of crime" because economic variables like poverty and inequality are not evenly distributed across societies. They respond to a pattern of ascribed distribution based on particular socio-demographic characteristics, and this differential needs to be included as a relevant factor affecting the variability of crime rates.

How the specification of this process should be described, explained, and tested, is one of the most important issues to resolve in contemporary research. One particular problem comes with the following question: to which extent this connection between ascribed inequalities and crime is limited to particular social contexts? For example, how far is this interaction exclusive to the particular historical process of discrimination and inequality of the USA? It is also possible to find the same relationship in Western European nations? Where the distribution of economic inequalities is historically different, and is mediated by the existence of a particular institutional structure helping to moderate the harshness of economic inequalities.

Before the appearance of Blaus' work, it was already known that economic processes like relative deprivation have a positive impact on the variation of crime rates, where countries, cities and communities with higher scores of relative deprivation also have an

increased probability of high crime rates. However, the appearance of ascribed inequalities represents an improvement in the explanation of the mechanisms behind relative deprivation and crime. By breaking down economic inequality into its differential patterns of distribution, and the factors determining such distribution, relative deprivation gained in complexity. The central point was the role of the social context and ascribed inequalities as a historically determined structure.

Thus, the link inequality and crime obtained a higher grade of complexity but also gained in explicative power. After ascribed inequalities, it became clear that the differential effects of inequality on crime must be included in the explanation, because economical inequalities themselves are differentially distributed according to socio-demographic factors, through distribution patterns that might vary according to historical national (or local) characteristics. This does not mean, though it would be desirable, that before assessing the importance of ascribed inequalities in an explicative model of crime, an exhaustive analysis of the long-term patterns of inequality distribution needs to me made. Nonetheless, only the possibility that the effects of economic inequality on crime could be different in a particular context, it represents a great gain for the ecological explanations of crime.

This is an important idea for the understanding of crime at aggregate levels and a promising perspective to grasp a more comprehensive assessment of national differences of crime rates. For example, if inequality is distributed according to historically determined national patterns, its distribution in countries like the USA is, not only correlated, but ascribed to race because of the connection between social inequalities and racial discrimination. If this idea is true, it can also be hypothesized that, in the case of European nations, the distribution of inequalities could be ascribed to other socio-demographic characteristics like class-membership, education, migration and social mobility. Assessing the differential effects of economic conditions according to coupling effects with other variables or social characteristics, represents a good opportunity to design more flexible theoretical models that could be able to retrieve the specifics of a particular context, and as indicated by Chamlin and Cochran: “to discern, and explicitly include in our model specifications, indicators of the macro-social constructs that can account for the effects of economic inequality on cross-national homicide rates.” (Chamlin and Cochran 2006:232)

II.4.A to-do list for the economy dimension

During this chapter we have reviewed almost every aspect in which the connection between economic conditions and crime had been treated in the research literature. Now, for the last section it is possible to say that the economic dimension of crime has been explained in two general but differentiated forms: firstly, economic conditions can be criminogenic through the alteration of individual motivational processes; secondly, economic conditions also have criminogenic properties by affecting social processes which turn out to influence the variation in crime. Thus, we have two general approaches illustrating two different forms in which the economy influences the variation of crime.

These two approximations of the criminogenic effects of economic conditions share a common problem: almost all the existent explanations depict a particularly fragmented panorama of the economic dimension. This fragmentation is problematic not because a homogeneous explanation should be desirable, but rather because the illuminated aspects are not depicting a broader conception of the economic dimension in all its complexity. With the fall of political economy, the last five decades had been characterized by the constant limitation of the scope of investigation to specific elements of the economy. As a consequence, micro perspectives have presumably gained explicative powers and empirical validity, but we have also lost the perspective of how other non-economical variables may be interacting and mediating the formation of such criminogenic effects.

As we saw in the review of the most commonly used economic explanations of crime, the preclusion of a broader perspective, capable enough to include not only non-economic variables as control variables, but also to include factors moderating and mediating the effects of economic conditions in particular contexts, has provoked a limitation and fragmentation of the available sociological explanations of crime. With this practice, much of the research in the last five decades has portrayed a conception of the economic dimension of crime as a set of factors with little or almost no connection to other social characteristics, rendering meaningless simple linear links between economic factors and crime.

Broadening the economic perspective not only implies the inclusion of non-economic variables in the models, it is also important to conceive the relationships between variables under a non-linear schema. It is normal to find that the way in which explicative and dependent variables are linked, follows a strict linear fashion with no space for a different type of relation between the variables. The available models and explanations of crime depict a quite straightforward relationship between economic variables and crime. In current

research, it is quite common to find models prescribing direct effects of economic conditions on crime rates, but they are rarely supported; there is an enduring heterogeneity in the empirical results that has become more a characteristic than a peculiarity. The empirical results are characterized by weak models, lower significance scores and the appearance of unexpected correlations (Crutchfield and Wadsworth 2004).

Most of the models constructed from elements of the major theoretical explanations foresee a linear relationship for the connections between economic factors and crime rates. Their design is often focused to depict simple linear relations between dependent and explicative variables, leaving not much space for the conceptualization of other types of relationships working in a non-linear fashion. As a result, this extended practice had firstly precluded the possibility of conceptualizing other relations that could have a greater influence as usually thought. For example, as we saw in the review of the different theories and approaches explaining the effects of the economy, the only general agreement to be found is that economical aspects indeed affect the variation in crime. However, a world of voices turns around the form in which these relationships take place. Unfortunately, the discussion on the issue is confronted with difficulties when depicting more alternative indirect relationships where elements like moderation and mediation of coupling effects with other non-economic variables need to be taken into account in the argumentative schema. Secondly, if the probability that non-linear relations between independent and dependent variables is not included in the models, their empirical tests are going to remain stuck in the same problems, which in turn will hinder the creation of newer, more effective methodological strategies to give account of non-linearity (Albrecht 2001).

In almost all the literature exploring the relationship between economy and crime, there are neither enough theoretical arguments nor empirical reasons for justifying the usage of the assumptions of linearity. By creating theoretical explanations strictly embedded, consciously or not, in a linear schema, the possibilities of improving the current explanations remains limited. For example, one basic characteristic of linear systems is the superposition principle (or additivity), where the net effects generated by two or more independent variables are the sum of each individual effect on the dependent variable. In other words, if crime is understood as a function of economic inequality and poverty, then the sum of the individual effect of economic inequality on crime and of poverty equals the general effect of both variables. The problem is that there are not enough theoretical reasons to keep treating the effects of some set of independent variables as addible, or as the linear sum of independent

components, because it is difficult to justify the absence of qualitative and/or quantitative differentials on the effects of variables like inequality and poverty.

Another problem related to the absence of non-linearity and the delusive simplicity of the actual models, is represented by the lack of concepts like time and space as intervening variables. The consideration of time is based on the idea that an independent variable (e.g. unemployment) would have different effects according to time-based factors or lagged effects. For example, the consequences of lower unemployment are not instantaneous, but appear after a time lag. There are two important advantages implied by the inclusion of time. First, with models making a better account of time in the modification of the relationships between an independent and a dependent variable, the almost traditional staleness of the existing models could be replaced by a more flexible view of the interaction(s) between variables in a certain period of time. Secondly, the inclusion of lagged effects will also help to conceptualize how these elements are affecting the variation of crime in a particular unit of analysis. This idea stimulates questions like: are the time-related effects of a variable *x* different according to the size of the unit? Is there a difference if the unit of analysis is a city or a county?

On the other hand, space, as an element interacting with the effects of independent variables, has been already recognized in the research literature, but not sufficiently explored. Particularly in the comparative research, it had been identified that the prescribed effects of an independent variable change according to the size and type of unit of analysis. For example, the Gross Domestic Product (GDP), as a measure of economic development, has a significant connection with the variation in violent crime rates at national level. However, this relationship fades in smaller units like cities, where new variables with different relationships appear, as in the case of economic inequality and its stronger effects in cities (Parker, McCall et al. 1999). Although this approach to space is relevant, it is still limited and does not represent the needed re-conceptualization of the explicative models. The main limitation is that under this conception the spatial dimension does not acquire the full significance that it may have in the explanation of crime. This is not a matter of the common questions about the significance of the social context or the relevance of the ecological perspectives of crime. The focus on the spatial dimension is explicitly and exclusively directed to reassess the social context as an important part on the chain of events leading to the variation of crime. It is a factor that not only influences crime rates, but has also been determined by other variables, which in turn are affecting the relationship between context and crime.

We have overlooked the fact that, although the economic conditions are important, their relevance is not to be fully understood as a direct straightforward and one-dimensional effect. On the contrary, the influence of economic conditions goes first through the social context, which is determined by particular characteristics, and only then a link to the variation of crime rates could be established: "[…] the sources of violent crime appear to be remarkably invariant across race and rooted instead in the structural differences among communities, cities, and states in economic and family organization." (Sampson, Wilson et al. 1995:41) If this idea is true, the inclusion of the context should be first directed to the explanation of how some variables, like economic conditions, are affecting or altering the social structural context of a determined area, or context as a dependent variable, and then try to make the connection with the variation of crime, or context as a independent variable.

The temporal and spatial dimensions of crime, meaning factors influencing independent and dependent variables, are also a key to understanding the notion of concentration effects (Sampson, Wilson et al. 1995; Short 1997; Oberwittler 2007). This concept is based on the idea that the factors recognized as independent variables, economic or not, are also affecting particular social contexts, and that the concentration (agglomeration/densification) of, for example, economic factors can change according to factors like time and space. The idea is that it would be illustrative to explain this concentration effects and understand the way in which the influence of a set of independent variables affect the context, and to examine if there is a visible relationship with particular affected contexts and a higher probability of crime rates.

My call to extend the economic dimension of crime, by making use of non-linearity and including elements like time, space and concentration, is thought of as a step further in the understanding and restructuration of the missing macro social mechanisms that has not been satisfactorily introduced in the literature (Chamlin and Cochran 2006). Mechanisms that, without appealing to micro psychological processes, could help achieve a better understanding of the links between economic processes, like economic inequality, and crime. This reinforcement of the importance of macro mechanisms also represents a change, not only on the form in which the greater social context is conceived as a relevant and interconnected factor, but also the whole conception about how the mechanism behind crime works. Actually, it is possible to begin to think about the variation of crime not as a linear covariation but as a process or mechanism, that could possibly be understood with the inclusion of factors of differentiation like space, time and concentration.

Conclusions

As we have reviewed in this chapter, the only "perspective" or "explanation" based on the effects of economic conditions that could be named as a economic explanation of crime, would be the explanation based on the presupposition of full rationality, the individual motivations to commit crime, the effects of deterrence, and the application of econometric models. However, despite their success in explaining very particular criminal phenomena they are particularly inappropriate for the study of crime rates and their distribution.

Without the economics of crime, what remains is a heterogeneous group of explanations which appears to be more interested in the empirical validation of the link between particular indicators (e.g., unemployment, economic growth, poverty or inequality) than in the variation of crime rates. These explanations are characterized by four common problems: firstly, the proposed arguments linking the characteristic *x* of the economy with crime suggest a quite straightforward relationship between the independent and the dependent variable. In these approaches or explanations it is not usual to find elements like mediation factors, time lags and differentiated effects. Secondly, they are almost entirely focused on the effects at the individual level namely, the motivation to crime through feelings (psychological states) of frustration, rage, stress, etc. Thirdly, the fragmentation of the economic based explanations has hindered the constitution of a wider concept of the "economic dimension" of crime, where, in the way of the old concepts of political economy, the different aspects of the economy could be integrated in a broader concept, which can reflect the complexity of the different types of economic factors involved in the variation of crime rates and their distribution. Fourthly, the focus on individual processes and the heterogeneity of explanations and results have also resulted in the loss or deprecation of the social context as a relevant factor, not only for the variation of crime, but also as a significant element in the explanation of the link between economic conditions and crime.

Our answer to these deficiencies is directed towards the reassessment of the way in which economic and non-economic variables conflate or interact within a particular context where it appears that a higher probability exists that the people living in such a situation could be engaged in deviant behaviour or illegal conduct. The reappraisal of the context is not only trying to include contextual variables inside the causal mechanisms, but to redefine its conceptualization, where a fundamental part of it is represented by the introduction of concentration effects, and by adding relevant dimensions like time and space to the analysis of crime.

These efforts are important to recover terrain in front of the other types or styles of explanations where the accent has been put on economic rationality (i.e. individual rationality, deterrence) or on minimal definitions of the economy where the pervasive effects are coming from particular economical processes (i.e. unemployment, poverty, growth, economic inequality). The current research on crime needs to make an effort to reaffirm the influence of economic conditions from a wider point of view.

A wider framework could be useful to deal with two relevant open questions particularly associated with the economic dimension of crime and generally extendable to the study of crime. If there is a relationship between the fluctuations of the economy and crime, and if this link cannot be specified as a factor affecting the realm of individuals' motivation, there are only two options available when continuing to explore the relationship without falling into the psychological fallacy: first, how economic hardship affects the increment of criminal opportunities and how strained social contexts are produced by the economy. Second, to understand these processes it is imperative to actualize our conception of economic conditions. While the structure and functioning of the economy in the current Western societies has been in constant change and increasing in complexity, the theoretical explanations and methodological instruments used to explain them have remained in the past, trying to clarify a type of reality that does not exist anymore. This is why concepts like mediation between different factors, moderation between a variable, and the analysis of the changes in the economic structure of a particular area are new factors that need to be included in the explicative frameworks.

III. Anomie and Strain as Instruments for the Comparative Criminology

The contact between sociology and criminology has always been present in many forms, but the most important has been the adaptation of sociological theories to the explanation of crime. One of the most relevant examples of this transmission of knowledge is represented by the anomie-strain tradition as the *per excellence* example of the sociological explanation of crime, and one of the most important traditions in sociology. A glance through the history of anomie and strain in social thought goes across the last decades of the nineteenth century, the whole twentieth century, with special increase of popularity in the seventies and its corresponding downturn in the late nineties, and a subtle but ongoing present revival.

The anomie-strain approach has been exposed to the normal swings that any influential explanation has to outlive. Highly appraised by the American sociology and polity of the sixties, to a great extent because of the contributions of Lawrence E. Cohen and Richard A. Cloward and Lloyd E. Ohlin,[29] the idea of a society which creates its own problems, such as deviant behaviour, achieved its pinnacle with the participation of Cloward and Ohlin in the design of one important and ambitious policy program of the Kennedy-Johnson administration: the Mobilization for Youth Program. Following their political success by the end of the sixties and along the next decade, the works of Merton, in particular the *Social Structure and Anomie* series (Merton 1938; Merton 1964; Merton 1968), became object of severe criticisms derived from the constant failure to find supporting evidence for the theory. However, despite the harshness of the attacks[30] the concepts remained inside academic contexts and far from been completely displaced.

At the beginning of the nineties, the anomie-strain perspective took a second breath in the hands of Robert Agnew (Agnew 1992; Agnew and Brezina 1997), Steven F. Messner and Richard Rosenfeld (Messner and Rosenfeld 1997). They identified some important misinterpretations based on false evaluations of empirical results which had provoked the premature and unjustified rejection of the theory. The reappraisal of anomie-strain theory was activated by a reassessment of the criticisms made of the classic version with the help of more sophisticated empirical tests of its controversial arguments. The results showed that the concepts of anomie and strain deserved a reanalysis of its theoretical and empirical relevance for criminology and the sociology of deviant behaviour.

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[29] Inclusion of important terms like legitimate and illegitimate opportunities in the opportunity structure idea developed by Merton Merton, R. K. (1968). Social theory and social structure. New York,, Free Press.

[30] Travis Hirschi declared the death of the anomie strain theory Hirschi, T. (1969). Causes of delinquency. Berkeley,, University of California Press.

The theory became the scope of an increasing number of research projects (especially in the American context), and the journals were again the scenarios of vigorous debates and interesting proposals on the anomie-strain perspective. The new works were specially directed to three points: 1) the improvement of the empirical evidence; 2) the development of the specification of the causal mechanisms linking anomie-strain with crime; 3) and to establish a dialog with other explanations. One of the most renowned theories continuing the anomie-strain tradition is the General Strain Theory of Robert Agnew, who made use of elements of social disorganization theories to improve the micro sociological components of anomie and strain. As the new interest in anomie and strain echoed in the improvement of its microelements, the macro perspective was left in a sort of oblivion. Although the work of Messner and Rosenfeld has given an important impulse to the debate on the macro sociological aspects, there is still a lot of work to be done; particularly on the dialogue and integration with other theories, and its usage in comparative research designs.

Thus, on behalf of the relevance of the anomie-strain perspective for the study of deviant behaviour and criminality, and considering the necessity of new proposals for the macro version, the present chapter will discuss central arguments of anomie and strain in order to sketch a theoretical explanation of rates of criminal violence (homicide and assault) at sub-national level in a cross-national perspective. The central question of this chapter will be the feasibility of anomie-strain as instruments for the comparative analysis of violent crime. To deal with this issue I will try to give a viable answer to two important critiques directed at the anomie-strain approach, namely: its limitation to economic motivated crimes and its embeddedness in the American context.

In the first part I will make a brief review of the history of anomie. Secondly I will explore the first sociological version of anomie made by Durkheim. Thirdly, I will jump to the work of Merton as the first and more important proponent of the modern versions of anomie-strain. Fourth, I will review the basic arguments of the Institutional-Anomie Theory of Messner and Rosenfeld. In the final section I will make a critical balance of the whole anomie-strain perspective, and I will sketch the idea of social strain as a viable option to give continuity to the macro explanations of crime, and as a theoretical instrument for the cross-national research of violent crime.

III.1. The Origins of Anomie

One important element to point out is that although it is widely accepted that Durkheim's thought was fundamental for the development of the concepts of anomie and strain, it is also true that their place in his reflections about social order was secondary. Moreover, their specific weight was also completely different. Anomie was a concept early introduced by Durkheim in two works: *The Division of Labor in Society* (hereafter *The Division of Labor*) and *Suicide*. On the other hand, strain cannot be identified as a well systematized concept in Durkheim's thought,[31] rather a creation by Merton based on Durkheim's ideas. Hence, taking into consideration this difference it will be useful to first explain the origins of anomie and its place in Durkheim's sociology and then take us all the way up to Merton.

The concept of anomie was not Durkheim's invention, but a reformulation and modernization of an idea that was already present since centuries in social thought. The origins of anomie can be traced back to classical Greek writings and Biblical texts: "The word anomie was absent, except for a few scattered cases, in the Latin culture. With the rediscovery of the Greek classics and Greek versions of the Bible, brought about by the diffusion of humanistic scholarship and the Protestant Reformation, the term reappeared in sixteenth and seventeenth century Western Europe, especially in English philosophical and theological writings" (Orru 1983:500). It was till year 1885 in France that the first nearly modern interpretation appeared in the works of the Jean Marie Guyau, a French philosopher and early sociologist who elaborated a version of anomie as an opposite to the Kantian idea of autonomy.

For Guyau the moral code governing behaviour was not of a transcendental nature, but situational and embedded in individual relationships. His rendition of autonomy took distance from Kant's metaphysics to describe an autonomous and anomic morality to come; anomic understood as the absence of a fixed law: "[…] he expands on this fact and finds it to be consistent with a modem ethic that is autonomously produced by the individual, and is, by logical consequence, free from external rules, i.e. anomic." (Orru 1983:505)

It was in this naturalist version where Durkheim found the idea of anomie and criticized it. In his critical assessment he wanted to invert the relation between moral and anomie into a negative one. For Guyau anomie was clearly impregnated with a positive meaning, implying the liberation of peoples' mind from a morality ruled by metaphysics. On the contrary, Durkheim's response was conceived to depict anomie with a negative significance, by representing the negation of morality itself. The concept proposed by

[31] Some authors Besnard, P. (1988). "The True Nature of Anomie." Sociological Theory **6**(1): 91-95. claim that it does not even exists as a concept

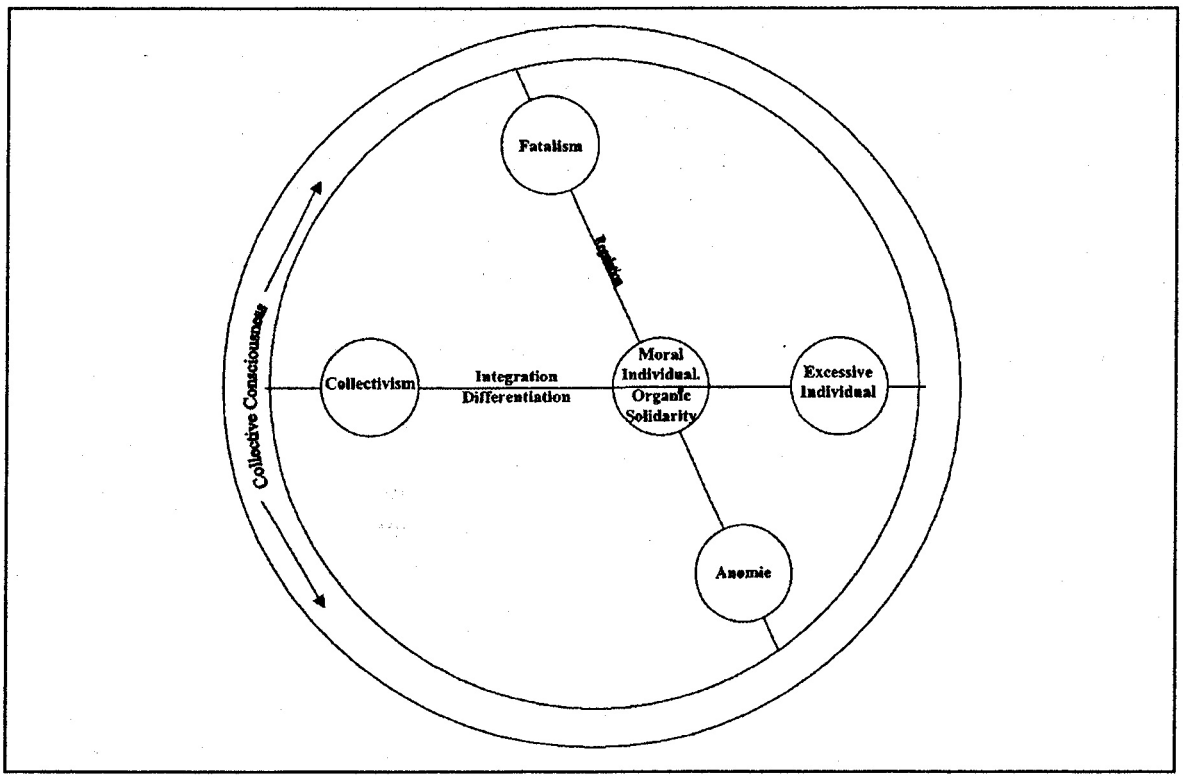
Durkheim was completely loyal to his notion of individuals behaving according to the moral rules created by the society: "The concepts of anomie by Durkheim and Guyau are intimately linked with their theories at large. Durkheim's theory is axiomatic in nature. Anomie can be identified only as a negation of morality, not as an alternative to a prevailing system of morality; this means that anomie does not have an autonomous identity, but exists only as a lack of moral status, a deformation of the ideal standard. Guyau, on the other hand, proposes in moral anomie a form of morality that is independently created by the increase in human knowledge and rationality, a morality in its own right, not a mere negation, as Durkheim argued." (Orru 1983:515)

Durkheim's version of anomie (as immorality) was not meant to be separated from his ideas on ethics and morals. His notions of society and order were based on an idea of moral order capable enough to maintain society's regulation and unity. Anomie as immorality (and not normlessness or lawlessness as normally acknowledged in textbooks) is depicted as a state of derangement or disarrangement (*dérèglement*) in which, neither the collective nor the individual had a place in morality (Mestrovic and Brown 1985).

Durkheim transported this negative version of anomie into his greater idea of social order, which was constituted by two different social processes: regulation and integration.[32] In *The Division of Labor* (1893) the central question about the conditions of possibility of social order was answered by Durkheim with two theories, or a theory of social bonding with two constitutive sub-theories (Besnard 1988).

[32] As indicated by Thome Thome, H. (2000). Das Konzept sozialer Anomie als Analyseinstrument. Diktatur, Demokratisierung und soziale Anomie. Universität Augsburg., it is still contested if it is correct to speak of the existence of two theories (regulation and integration) in Durkheim. But as stated by Besnard and others Besnard, P. (1988). "The True Nature of Anomie." Sociological Theory **6**(1): 91-95., it is useful and necessary to relate both theories of Durkheim's thought with anomie, because Durkheim had not strove to attain a systematical reflection of anomie with its theoretical and empirical implications.

Figure 1: Durkheim's analytical types[33]



The definition of regulation is connected with Durkheim's notion of morals. He understood regulation as the control of people's passions and desires by means of the internalization (socialization) of collective values (organic solidarity) and moral individualism. "Durkheim discusses the term social regulation as the degree to which society places limits on individual's desires and aspirations through normative or emotional definitions." (Thorlindsson and B. 2004:272) In this sense, anomie is portrayed as a state of immorality, a situation where society retreats and the individual is left alone without the regulatory functions of society to establish his normative limits and courses of action. The idea of anomie in *The Division of Labor* is linked with temporal states of crisis, which debilitate the moral regulation of society resulting in the absence of rules to assure the cooperation between social roles, and generating an anomic division of labour with high levels of individualization, fierce competence, and null cooperation.

[33] From Thome, H. (2001). "Explaining Long Term Trends in Violent Crime." Crime, Histoire & Sociétés / Crime, History & Societies **5**(2): 69-86.

In *Suicide* the treatment of anomie is different from the previous work. The anomic situation described in *the Division of Labor* were basically the result of temporal periods of crisis were the societal moral control of conducts weakened. The latter version of anomie was accompanied by a different conception of the regulation problems. The difference was the conception of temporality, which became expanded with the notions of structural and abrupt crisis. This version of anomie is also different because it was the first time that Durkheim made a direct association between a greater social process (lack of social control due to structural or acute crisis) and particular deviant conducts: chronic and anomic suicide. In *Suicide*: "society is the moral disciplinary body whose authority must not only depend on force but also accepted as just. Now, when society is disturbed by crises [acute or structural], it is momentarily incapable of exercising this moral influence; society is then in a state of anomie, and this produces anomic suicide" (Deflem 2004).

Thus, having in mind these two approaches to anomie it is possible to say that Durkheim described two different effects derived from the failure of social regulation. The first one was the anomie of *the Division of Labor* where an anomic context depicted specific social effects on society as result of increasing industrialization. On the contrary, the anomie of *Suicide* can not only be structural or acute, because Durkheim was linking some special characteristics of a social process with an individual conduct understood as an outcome, as a response of an anomical context; it was the first time that anomie, as a macro social phenomenon, was connected with a behavioural response.

This differential treatment of anomie can be better understood as a consequence of the improvement of Durkheim's theory of regulation. The conception of social order in *the Division of Labor*, with its two axes: regulation and integration, was closer to Durkheim's ideal of a moral-based social science, while in *Suicide* the objective was more analytical. These different approaches to anomie, have been used to justify that anomie was an idea (not even a concept) of secondary importance in Durkheim's theory.

Durkheim's notion of anomie is difficult to understand apart from its theory of regulation. The numerous comments on the limits of the notion of anomie (see (Besnard and Pickering 2002)) are based on the idea that anomie is only a minor component of the theory of regulation, exclusively designed to explain a particular type of suicide and not as a general concept about crime-prone contexts. For example, there are discussions about how other kinds of deviant conduct like homicide could be better enclosed with the same explanation. Under Durkheim's logic, behaviours like suicide and homicide are comparable to the extent that they were produced by the same distortions of the processes of social regulation and integration.

Nonetheless, this is not a unanimous point of view; for example DiCristina (Dicristina 2004; DiCristina 2006) has found not only a different explanation of homicide within Durkheim's work, but has also named it a "general theory of homicide" (DiCristina 2006:212) and "latent theory of homicide" (DiCristina 2006:230). Yet, for DiCristina, anomie is an irrelevant factor in the explanation of homicide because the core of Durkheim's explanation is based on the concepts of social development, socialization/integration and gender.

With these arguments in mind, what can be said about the analytical and empirical advantages of Durkheim's anomie? First of all, his main contribution to the posterior development of anomie was the conceptual reformulation of Guyau's concept, which allowed anomie to relate not only to a series of changes or alterations in the social structure of society, but also as necessary (not sufficient) elements generating particular outcomes. In other words, the way in which Durkheim linked anomie with one type of deviant behaviour was revolutionary, and made a path that guided Merton's work to the definitive conversion of anomie as a proper concept for the study of deviant behaviour.

On the other hand, the limits of Durkheim's anomie are two: a) the non-systematization of the concept, indeed, concerning to Durkheim, it would be more precise to talk about the notion of anomie and not about a concept; b) and his strong dependence on the notion of morals. For the first point there is no agreement between the experts, for example there are scholars like Besnard who has clearly stated that anomie was a minor notion without great importance, an idea abandoned by Durkheim. In contrast, authors like Mestrovic defend the opposite idea, namely that Durkheim never gave up his interest in anomie, and that posterior developments of anomie in his work could indeed be easily identified. "Our point is that Durkheim's concern with anomie and *dérèglement* bespeaks his concern with a science of morality. It is not true, as Besnard (1982:46) claims, that anomie ceased to concern Durkheim after 1902. There is no real break in Durkheim's thought, and Durkheim's sociology is concerned with the question how one may study morality scientifically" (Mestrovic and Brown 1985:95)

Besnard's and Mestrovic's positions are not opposite at all. On the contrary, their arguments are based on the same fact, but developed in different directions. The shared point lies on the recognition that anomie is related with the theory of regulation, and regulation is completely permeated with Durkheim's conception of morals and ambitions to create a science of moral facts. On the other hand, the differences emerge in which specific aspect of the theory is related with anomie. For example, Mestrovic and Brown (Mestrovic and Brown

1985) found continuity in anomie because they stress the study of morality and its function in society as an interest pervading and guiding Durkheim's ideas. In contrast, Besnard finds other theoretical instruments as better analytical categories of deviant behaviour than anomie (Besnard 2005).

These different appreciations could be subsumed by the fact that the form in which Durkheim used anomie in *The Division of Labor* and in *Suicide*, is not contradictory or distant to his subsequent works, but a technical variation or prolongation of his interest on morals: "[...] The technical use of anomie in parts of *The Division of Labor* and in *Suicide* can be considered a variation on the moral concern that produced Durkheim's original formulation. In later works, like *Moral Education* and *The Elementary Forms of Religious Life*, the word anomie disappears, but the concern with moral order and the search for a solution to the pathological absence of moral norms in modern society is more explicit than in Durkheim's previous works." (Orru 1983:510) With this idea in mind it is not only easier to recognize the coherency of anomie concerning his greater interest in morals, but also to identify the principal disadvantage of Durkheim's anomie as a proper concept for the analysis of deviant behaviour. As we have already mentioned, the notion or concept of anomie can only be fully understood by recognizing its embeddedness in morals. As a result of this characteristic, Durkheim's anomie portrays an important limitation: anomie defined as immorality, *dérèglement* or the absence of society, cannot be easily operationalized and linked with empirical indicators.

To finish this section on the origins of anomie it must be added that the definitive step towards its consolidation as a concept for deviant behaviour was made by Merton, by cutting the link with morals. The great consequence and advantage of such a manoeuvre was the closure of anomie's modernization as a sociological concept for the explanation of deviant outcomes, and one of the more famous concepts of sociology. Nevertheless, the way in which he gave it conceptual maturity to anomie was not flawless, in the sense that Merton made a too strong linkage between anomie and culture, a relation that implies some problems that need to be reviewed.

III.2. Merton and the American Dream

The work of Robert K. Merton represents two fundamental steps towards the consolidation of the sociological analysis of deviant behaviour. First, he identified deviance not as phenomena produced by certain pathological social conditions, but as a result of the "normal" functioning of modern societies; second, he presented a coherent and systematized schema that unified two important and often contending elements of societies: social and cultural structures.

The influence produced by his most famous paper *Social Structure and Anomie* (Merton 1938) (hereafter SS&A), and the posterior related publications (1949, 1957, 1964, 1968) could be regarded as a theoretical work continuing (and completing) the legacy of Durkheim. To draw a continuity line between Durkheim and Merton it must be said that Merton clearly identified the principal problem linked with Durkheim's explanation of deviance, and decided to solve it in the following two ways: the differentiation between social and cultural structure and the reformulation of anomie.

As we saw in the first section, Durkheim's notion of anomie was not only strongly bounded with his general ideas about society (moral regulation of conducts) but also with the idea of anomie as a pathological social condition. In contrast, for Merton the most important factor influencing the distribution of deviant conduct was related to the social and cultural structure of societies, where anomie was a "normal" product of both.

The theory launched by Merton was based on the existence of a social structure containing class distribution, later to be extended with the legitimate/illegitimate opportunities schema, and a cultural structure determining the socially acceptable ends and means to achieve them. The social structure was characterized by the form in which the socio-economic classes and their corresponding access to opportunities were distributed across social aggregates. Conversely, the cultural structure and the values included in it encompassed two elements: the social definitions of economic and social success (ends) and the specification (legitimate/illegitimate) of the means to achieve them. According to Merton, anomie is defined as the discordance between the reduced availability of opportunities and the incrementing pressure towards economic success by the erosion of the relevance of legitimate means.

In these terms, Merton's concept of anomie could also be defined as the conditions resulting from the specific distributional characteristics of social and cultural structures. For the former the distribution of economic opportunities is heterogeneous by means of class positioning, where belonging to the lower strata represents a reduced number of opportunities to acquire economic success. In contrast, Merton's understanding of the cultural structure

implies, at first, a homogeneous distribution across social classes of the "acceptance of" and "belief in" cultural values and the corresponding means to obtain them. Under this logic, the differential distribution generates persistent pressures in the sectors were the social structure has provided a lesser number of economic opportunities. These pressures[34] initiate a process that: affects the cultural definition of legitimate and illegitimate means; blurs the difference between them; and places all the importance on the achievement of cultural defined ends without considering the type of means to be used. The discrepancy between the social distribution of opportunities and the acceptance of cultural values, followed by the declining emphasis on the use of legitimate means, are the necessary conditions for the emergence of anomical contexts.[35]

The anomical contexts described by Merton were the direct product of the "American Dream" conceived as the cultural ideal of equal opportunities to achieve social, but above all, economic success. Merton also proposed that the tension generated between the demands of the American Dream and the reduced number of opportunities for economic success was particularly acute within the lower classes of society. And these anomical contexts were stark crime-prone situations with particularly high rates of delinquency in the United States. These effects, generated by the dislocation between the configuration of the social structure and the socially accepted ideals of success fostered by the cultural structure, were parts of Merton's explanation of deviant behaviour's differential distribution within and across social classes.

III.3. The nightmare of Merton's American Dream

Although Merton's work represents a significant contribution to the sociology of deviance, the empirical status of his main statements remains contested. If a brief history of the success and failure of the anomie/strain tradition could be written, it would said that although originally conceived as a macro theory, its most successful elements have been the micro-motivational. In contrast, the macro elements have not had the same luck. After his famous boom in the fifties and sixties, the anomie/strain tradition found continuity in the work of Cloward and Ohlin (Cloward and Ohlin 1960), Cohen (Cohen 1955), and in the nineties with the appearance of the Institutional Anomie Theory (hereafter IAT) of Messner and Rosenfeld (Messner and Rosenfeld 1997). Nevertheless, empirical research has not found supportive evidence for the whole macro sociological arguments derived from Merton, making of it a partially supported theory.

[34] This is was Merton identified as strain and therefore start point of Agnew theory
[35] Merton identified five types of adaptation to this context: conformity, innovation, ritualism, retreatism and rebellion (1968)

Two are the most important empirical failures of the classic version of anomie-strain. The first one has to do with the type of criminal conduct to explain. Although it was conceived as a theory of criminality and deviant behaviour, the empirical tests showed that the hypotheses of anomie-strain were adequate to explain the variation of economic motivated crimes like property crime, but not for crimes of violence like homicide.

The second problem related with empirical research is the complication of the theory to relate its indicators with the variation of crime outside the lower classes (Messner and Rosenfeld 1997). Merton itself confronted this critique in the 1957 edition of *Social Theory and Social Structure* and made explicit mentions of, and examples on, how his anomie-strain theory was also an appropriate instrument to explain white-collar crime. Nonetheless, the claims about the failure of anomie/strain to assess non-economically motivated crimes remained as a valid and actual problem of almost every approach based on elements from the anomie-strain theory.

It must been also said that there is a slowly growing literature (e.g. Messner, Rosenfeld, Pridemore), which though is not explicitly trying to create a anomie-strain based explanation for violent crimes, has certainly included different types of it (e.g., homicide, assault) as dependent variables to test hypotheses closely related to Merton's works. Finally, the whole theory has been also criticized on its failure and lack of interest in the explanation of the variability of crime rates in other social contexts: "[…] beyond the suggestive descriptive accounts of American society relative to other nations on the cultural and structural dimensions of Merton's theory, we know relatively little about the empirical validity of Merton's explanation for variation in instrumental crime rates between different social collectivities." (Cullen and Messner 2007:89)

Together with the empirical problems, the anomie-strain theory has been also appointed with critiques regarding its theoretical structure, with special focus on the causal mechanisms linking the social and cultural elements with the motivation to commit crime (Bernard 1987). In general, this problem is connected with the absence of an internal differentiation between its macro and micro components. The main problem identified is the absence of clear definitions of the causal mechanism(s) linking the macro-structural components (opportunities structure and cultural values) with the individual motivation to deviate as a form of adaptation. Due to these difficulties, some interesting articles have been written to find an answer for the causal mechanism problem. As a result, there is agreement in the fact that Merton's vision of society and deviance contains two different theories (Featherstone and

Deflem 2003; Marwah, Deflem et al. 2006) or one theory with two levels of observation.[36] First, there is a theory (or macro-level explanation) of how certain characteristics of social aggregates (in conjunction with specific cultural definitions of economic success) influence the commitment to norms and the differentiation of legitimate/illegitimate usage of means. Secondly, there is a theory (at micro-level) about how certain pressures, emerging form particular dislocation(s) between the socio-economic and cultural configuration of social collectivities, are translated by individuals as motivation to different forms of adaptation where crime is one of these adaptations. The macro elements are related to the concept of anomie and the micro-motivational by the concept of strain.

Although it is clear that the concept of strain is the link between the macro processes and individual behaviour, it is not evident what the concept is describing or referring to: a social characteristic or an individual experience of frustration. For some authors strain is a description of the frustration and pressures felt by individuals in anomical social contexts (Passas and Agnew 1997), while for others it refers to some features of the social structure which increment the pressure towards deviancy (Marwah, Deflem et al. 2006).

III.4. Anomie goes institutional: the Institutional-Anomie Theory

After more than sixty years, Merton's ideas still find support, adherents and there is still continuity for his research program. However, almost all the subsequent work has been focused on the micro components of anomie and strain.[37] Unfortunately, the macro component of Merton's heritage has not been satisfactorily explored and remains as a pending issue for the theoretical and empirical research on crime (Featherstone and Deflem 2003).

The only recent proponents on the continuity of the macro program are Steven Messner and Richard Rosenfeld with their Institutional-Anomie theory. Messner and Rosenfeld depart from what they have considered the great advantage of Merton's work: the differentiation between social and cultural structure. For the authors, the specific values given to each structure in the causal mechanism contain a heuristic equilibrium between both structures: "Neither cultural conformity nor structural deprivation is, by itself, a sufficient cause of crime in Merton's formulation […]" (Messner and Rosenfeld 1997:53); which prevents the common overemphasis on either social of cultural structural effects.

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[36] In a recent article Baumer Baumer, E. P. (2007). "Untangling research puzzles in Merton's multilevel anomie theory." Theoretical Criminology **11**(1): 63-93. has introduced a new term to this debate, by naming Merton's anomie/strain theory a multilevel theory, that is to say, that Merton's framework encompass a causal mechanism that plays in both fields (macro and micro), and that such entanglement must be assessed because an appreciation of anomie/strain theory as two independent theories without connection decreases his complexity and his descriptive capacities.

[37] The most cited exponent of this line is Agnew's General Strain Theory

Nonetheless, they also found meaningful limitations to Merton's proposal. The fundamental problem cited by the authors is connected with two basic concepts of the anomie schema: culture and social structure and their relationship with the institutions of modern societies. In general, they rendered the concept of social structure as incomplete because there was no place for these institutions. By echoing the boom of neo-institutionalism in political science, their critique of Merton has focused on the limiting of social structure to one function (building of opportunities) and his highly homogenized concept of culture. Furthermore, they also found a pending issue concerning the anomie-based empirical research namely; anomie theory was a useful instrument, though not exempt of problems, for the explanation of the social distribution of crime within a society. However, it has not been used to research the variation of crime rates across societies. In order to find a satisfactory answer to these problems Messner and Rosenfeld created the Institutional-Anomie Theory (IAT).

More than an entirely new theory, the IAT represents a concise reformulation and widening of the macro elements of the classic anomie theory. Their main proposal is based on the inclusion of social institutions' effects in the mechanism linking social structure, culture and crime variation. Basically, they have identified how the cultural values and ideals of the American Dream are not only distributed through the cultural structure as Merton defined (nurturing economical success and not reassuring the usage of legitimate means), but also by the institutional framework of society. Moreover, the IAT indicates how social institutions (specifically: family, education, polity and religion) may be also subjected to profit-seeking values.

The IAT implies the existence of an institutional balance of power where different cultural values (e.g., pro-social and capitalist culture) are in constant struggle. When the institutional balance of power turns towards a profit-driven culture, with economic institutions imposing their rationale, the alleged pro-social institutions, designed to protect citizens from the negative turnouts of the economy, begin to change by reducing their normal functions (i.e. weakening of social control) in favour of a culture of economic success. In conjunction with this particular configuration of the institutional balance of power, the cultural structure of society disseminates the basic capitalistic values of the American Dream without emphasizing the usage of legitimate means. Thus, this particular combination between the economic ideals permeating the cultural structure and the arrangements of the institutional framework are the basis for anomical contexts which stimulate criminal conduct. "Institutional anomie theory implies that economic deprivation will be less salient as a predictor of serious crime in the presence of strong non-economic institutions. Therefore, they hypothesized that the

association between poverty and property crime is conditioned by the strength of religious, political and family institutions." (Kim and Pridemore 2005:1381)

The importance of the IAT for current sociological research on deviance represents an improved specification of the social sources of anomie and its liberation from the American Dream. The notion of an institutional balance of power takes distance from the ideals of the American Dream and reintroduces the idea of how the dynamics and ethics of the economy and the market can irradiate and influence the functioning of other institutions or institutional fields; an interaction that can take place in almost any kind of industrialized society. With this modification, the anomie theory can no more be conceived as an *ad hoc* explanation of the *American exceptionality* in terms of its high rates of criminal violence and celebration of strong capitalist values.

III.5. The anomie/strain tradition and the study of violent crime

After reviewing the three most important macro versions of the anomie-strain theory, there is an important question that remains open namely, which of these could represent a viable explanation for the cross-national analyse of violent crime?

Although Durkheim's version has not been widely applied to violent crime, there are interesting examples. First, there is a group of studies applying elements of his theory of social order to explain the long-term variation of violence in Western societies (Gurr 1989; Eisner 2001; Thome 2007). These works are basically interested in macro-sociological theorizing about the properties of social systems and their relations with long-term changes, but not exclusively in, criminal violence rates. Inside this group there are studies also interested in crime rates in smaller units of analysis (national or sub-national) and in a smaller temporal perspective, and they often refer to the work of Durkheim as a explanation of deviant behaviour and crime (Krohn 1978; Messner 1982; Neuman and Berger 1988; Huang 1995; Thorlindsson and B. 2004; DiCristina 2006).

The second group which is usually focused on violent crime conduct, such as homicide, is often classified as part of the developmental theories of violent crime, where its variation is explained through the increment of the amoral individualism in contemporary societies, produced by the processes of industrialization, urbanization, and the increasing specialization of economic life. The problem with these Durkheim-based explanations of violent crime is that they have reached the limit of their capacities. The developmental explanations were useful to explain differences between the rates of violence in Western, capitalist societies with other cultural, political and economical structures; levels of

industrialization; and grade of insertion in the global economy. However, the developmental perspective has not been useful to perceive the probable differences associated with the variability of violence rates between and within nations with similar structural characteristics.[38]

Concerning the version of anomie-strain originated from Merton, the study of violent crime has not been satisfactorily explained. As we saw, the concepts of anomie and strain have been more successful in explaining diverse types of economically motivated crimes in different units of analysis and levels of observation. The factor limiting Merton's theory, and its derivatives, to a very specific kind of criminal conduct is the pervasive emphasis given to the economically driven cultural values of the American Dream; the place of economic interest is located almost everywhere in the causal mechanism linking macro and micro social factors. However, the anomie-strain theory should not be constrained to material crimes, because its social structural elements at different levels of observation could also represent a useful instrument in the explanation of violent crime.

An interesting example is the evidence found in some empirical studies based on the IAT using homicide data as an indicator for violent crime (Messner and Rosenfeld 1997; Savolainen 2000; Kim and Pridemore 2005; Chamlin and Cochran 2006; Chamlin and Cochran 2007). Although, there are sensitive issues needing attention concerning the creation of better indicators and the improvement of causal mechanisms, the IAT is a fundamental step towards adapting useful elements of the anomie-strain tradition to the study of violent crime. The proposal of the IAT represents a wider idea of social structure, by including the institutional framework, and the partial embodiment of the pervasive effects of the economy-oriented values inside the institutions. For the study of violent behaviour, the work of Messner and Rosenfeld implies a clarification and an expansion of the social roots of criminal violence.

[38] As a part of these group there are a new series of works leaded by Pridemore Pridemore, W. A., M. B. Chamlin, et al. (2007). "An Interrupted Time-Series Analysis of Durkheim's Social Deregulation Thesis: The Case of the Russian Federation." Justice Quarterly **24**(2): 271 - 290. who are analysing the consequences of social, political and economical change on the incidence of crime and violent crime in ex-communist societies, by applying (not exclusively) some elements of Durkheim explanation of social order.

Conclusion: Sketching a proposal

We have briefly reviewed three pillars of the sociological explanation of deviant behaviour: Durkheim's theory of social order and its notion of anomie; Merton's theory(s) of anomie-strain; and Messner and Rosenfeld explanation of the institutional sources of anomie. However, the question of the applicability of these theories on the analysis of violent crime remains open and problematic.

Each of them depicts a particular definition of anomie with a specific weight in the theory. For Durkheim, anomie is the direct result of the failure of the regulation process, produced by chronic and acute economic crisis. The consequence is the deficient moral regulation of the ends that individuals follow, ends that will be no more ruled by collective sentiments of solidarity and cooperation, but by competence and individualism. This loosening of social norms determining these ends will engender a pathological social differentiation called the anomic division of labour and individual deviant conduct like the anomic suicide. In sum, Durkheim used an explanation of social disorganization to clarify deviant outcomes like crime and suicide.

In the case of Merton, anomie is understood as the greater social context resulting from an acute dislocation between the goals determined by the cultural structure and the deinstitutionalization (demoralization) of the legitimate means to achieve them. However, for Merton an anomical context is a necessary, but not sufficient, condition for the appearance of deviance. The concept of strain is the link between the macro structural condition named anomie and the resultant deviant behaviour. Strain is defined as the pressure generated by the stratified and blocked access to institutional means (distribution of opportunities) and the commitment to cultural goals. The answers to such pressures are five types of adaptation, from which only one (innovation) implies deviant behaviour and criminality, by using illegitimate means to achieve the accepted goals of the American Dream. Summarizing, Merton makes the equation posted by Durkheim more complex by including three aspects: first, it focuses attention on means not on ends; second, it uses a social disorganization theory to explain a macro-structural process (anomie); and third, it introduces a theory of deviant behaviour to explain a socio-psychological phenomenon (strain) whose outcome is crime.

In the Institutional-Anomie Theory, anomie is no more defined as a macro structural arrangement, but as a product of the institutional framework of societies. For the IAT, modern industrialized societies have an institutional balance of power where the rationale and ethics of economic (market) and non-economic institutions (polity, family, religion and education) are in constant interaction. When the economy imposes its ethics and dynamics without been

counterchecked by other pro-social institutions, the production of culturally determined ends and the usage of legitimate means become influenced by the economic institutions. This particular situation, where the institutional balance of power is dominated by the market, is depicted as an anomic context where social interaction is unprotected from the vicissitudes of the economy; a situation where the rates of serious crime tends to be higher. Thus, the IAT can be outlined as a continuation of Merton's concept of anomie by improving the specification of the institutional sources of anomie; the IAT also makes use of a middle range theory of social organization to explain anomie.

These perspectives contain three explanations of anomie as an outcome of social disorganization processes at the structural and institutional level of society. However, there is only one explicit theory of deviant behaviour (Merton's theory of strain) which tries to connect a structural produced context (anomie) with an individual conduct (crime). It is precisely the notion of strain what needs to be extended to overcome the limitation of the anomie-strain tradition to materially motivated crimes.

My proposal is to increase the scope of the concept of strain in order to identify its social sources. Robert Agnew has made an important advancement on the posterior development of the concept. However, his emphasis was on the micro implications of strain or on how strain is translated into a motivation to commit crime. Specifically, the General Strain Theory (GST) is based more on the types of strain than on its social sources (Agnew 1992). The GST is an approach that says much about the individual experience of strain, but almost nothing about the origins of the pressures. Merton was very aware of the importance of the social sources of strain and as a result he made one important modification of his concept from the blocking of institutionalized means (Merton 1968) to the opportunities structure (Merton 1995), which could be understood as the objective social conditions determining the degree of strain in specific contexts. In the paper where Merton renamed his anomie-strain theory as the anomie-and-opportunity-structures paradigm (Merton 1995), he stated that the social roots of deviance and criminality were related (in a probabilistic relationship) by three structures: social structure, cultural structure and the opportunities structure.

The inclusion of the term opportunities structure was thought of as a substitution or update of his initial notion of blocked institutional means: "Most individuals in society accept cultural goals, but the access to legitimate avenues for goal attainment are blocked for other people, causing them to reject the legitimate (and often legal) means to achieving the accepted goals. According to Merton, this differentiation and its consequences are not randomly distributed across society."(Featherstone and Deflem 2003:480)

Thus, in order to get his theory closer to the notion of individual agency without losing contact with structural elements, he attempted to give a better account of the objective conditions affecting the quantity of strain towards deviation: "Opportunity structure designates the scale and distribution of conditions that provide various probabilities for acting individuals and groups to achieve specifiable outcomes. From time to time, the opportunity structure expands or contracts, as do segments of that structure. However, [...] location in the social structure strongly influences, though it does not wholly determine, the extent of access to the opportunity structure. By concept, then, an expanding or contracting opportunity structure does not carry with it the uniform expansion or contraction of opportunities for all sectors of a socially stratified population, a familiar enough notion with diverse implications". (Merton 1995:25)

With the inclusion of this idea Merton gave a certain degree of independence to the concept of strain in relation to economically driven values. In his aforementioned paper he deals with the idea of culture almost as it were more a homogeneous idea, distributed across society, with peaks in the lower and higher classes. This latter concept of strain became more independent from the commitment to cultural values (materialistic ends), and gave more attention to the form in which socio-economic characteristics may increase or decrease the level of strain, which is probabilistically associated with deviancy and crime.

To see if this latter idea of Merton's can be more useful to explain violent crimes and to overcome its limited application to economically motivated crimes, I would like to give continuity to his idea about the objective conditions related to strain by incorporating the idea of institutional framework used by the IAT. I am therefore proposing a concept of social strain containing three basic elements: ascribed economic conditions, opportunities structure and institutional configuration of a given social unit. The institutional configuration is defined as the actual institutional framework on a particular social unit where the prevalence of economic institutions or social institutions can be assessed.

IV. Social Strain

Since the very first pages of this work, my main objective has been the progressive construction of a solid case for the introduction of social strain as a theoretical and empirical instrument for the analysis of violent crime and its comparative research. In view of its importance for criminology and the sociology of crime, I have tried to portray the state of the art of violent crime and identify its more important pending issues.

In the first chapter, I reviewed the place of comparative research as an indispensable tool to collect valuable information that can be used to redefine, improve, and restructure the existing theories of violent crime. However, I also identified that these advantages of the comparative research design, particularly in the case of homicide, are in a state of latency. The reason is the lack of a closer connection between theoretical and empirical questions where the empirical enquiries need to be closely guided by the theory. In the second section, I reviewed the whereabouts of the explanations of violent crime based on the effects of economic processes and factors. Following the same line of thought, the third chapter explores the interstices of violent crime explanations based on the traditional concepts of anomie and strain.

In the reviews, I clearly identified that what we know about homicide as a sociological problem is concentrated in two types of explanations: the economical and the socio-structural. Each of them is confronted with theoretical puzzles and methodological problems that, if not solved, will hinder the opportunity of a more differentiated theoretical approach and a confident application of comparative designs. Such puzzles are particularly relevant to the macro explanations of violent crime, and in view of that, in each chapter I considered different theoretical possibilities to solve these problems. In the present chapter, I will try to collect these ideas from former sections to present a solid argument for the concept of social strain, as a possible and compelling answer to some interesting questions in violent crime research.

Although I am using the word “concept”, social strain is not conceived as theory by itself, or even as a constituent part of a greater framework. Nevertheless, my intentions behind the concept of social strain are based on the necessity of thinking about social roots of violent behaviour in a significantly different way. First of all, social strain is thought as a theoretical instrument to facilitate the comparative study of homicide rates. Its main objective is the depiction of social mechanisms embedded at the meso level and the explanation of their possible relationships with violent crime.

I want to differentiate social strain from other similar concepts on three basic points: first, social strain's improved descriptions of the factors interacting at a particular level of observation, in this case meso-level, because social strain is level attached; second, its depiction of the links between explicative factors and violent crime through the concept of social mechanisms; and third, the description and explanation of probable links between the theoretical frameworks explaining the same phenomena at different levels of analysis. The importance of this connection is that it includes the possibility of establishing bridges of communication between "different" perspectives, in order to gather more information of the processes fluxing through the levels of observation, from the variables working at the macro level to the final assessment of the individual motivations behind criminal conduct.

These are the three points upon which the concept of social strain will be built in this fourth chapter. It will be explained as the description of a contextual configuration which is particularly favourable (criminogenic) for the appearance of increased rates of violent crime. My description will be focused on the identification of the relevant socio-economical mechanisms at the meso-level that generate such contextual configuration. The three components involved in the consolidation of such mechanisms are Ascribed Economic Conditions, Opportunities Structure and Institutional Support.

IV.1. Positioning the concept of social stain in a greater perspective

The study of crime as a social phenomenon is composed of three basic premises of social science research: 1) the extensive description, 2) the creation of theory-oriented questions on the evidence, and 3) the description of the mechanisms linking explicative and dependent variables.

Although crime research has been a regular presence in the social sciences, and while there is a considerable amount of gathered knowledge about the different social factors that might affect crime, the available theoretical and methodological instruments are still not in a position to give a wider picture of the phenomena of violent crime. The question is not about the pertinence or desirability of a general theory of crime or violent crime, the main concern is a broader comprehension of crime as socially embedded phenomena happening at a particular level of observation, and possibly connected with mechanisms at other levels of analysis.

Under this idea, a wider observation of violent crime should have at least two characteristics: 1) it sees violent crime as social embedded phenomena whose social mechanisms are particular of a level of observation; and 2) it contemplates the possibility of an underlying connection between levels of observation. The last point is of particular

importance for the general understanding of violent crime, to foster dialogue and discussion between different theoretical approaches. The connections between levels of analysis are conceived not only as a methodological caution. This idea goes a little further by recognizing that a social mechanism can be fully understood only if it is placed in perspective with other levels and their connections. I refer to a layered-like schema, where different mechanisms, in their corresponding level of observation, are connected as superimposed layers. Each layer on its own depicts a specific relation between independent and dependent variables. After these layers are superimposed, the result is a picture of different dimensions of same phenomena in this case, violent crime.

The connections between layers are not viewed as determinant factors, but as limiting conditions. With this idea, it is possible to make a good description of the mechanisms influencing the variation of violent crime rates at the meso-level, through the identification of the particular contextual configuration of a level of analysis. This could inspire compelling questions such as: which macro processes are responsible for the emergence of the contextual configuration at meso level? How is the identified configuration linked with the social mechanisms behind violent crime variation at the micro and the interactional level? The answers may show that micro and interactional explanations are not occurring in a vacuum, but rather their effect can be observed on other levels. Every social embedded phenomenon, therefore, is not a spontaneous consequence. On the contrary, every social phenomenon has a kind of historicity that can be found on the interconnections between levels.

What is the advantage of thinking of violent crime as a social phenomenon? First, it opens channels of dialogue with other theoretical explanations. The communication with other explanations will work as a kind of heuristic limit that will promote the further development of each perspective as an integrative conception of violent crime. Second, the study of violent crime will profit with its specification as a social embedded phenomenon, and as a sociological fact subjected to long-term historical process that limit and habilitate the smaller process taking place at the other levels of observation. This idea may not be directly connected with an augmentation of the prediction capabilities of violent crime research, however, an improvement on the descriptive and explicative capacities could be expected.

The aforementioned idea will serve as the background for my analysis of violent crime rates with the concept of social strain. The strategy is as follows: if I can depict the causality behind the variation of violent crime as a flux of mechanisms across levels of analysis, then the next step will be the decomposition of that large process into its constituent parts. In this

case, I will be working with the deconstruction of the meso-level mechanism by the identification of a contextual configuration called social strain.

IV.2. The level of observation: violent crime at the meso level

Because my research interest is focused on the comparative study of violent crime (in the form of homicide) a specification of the wider picture is strongly needed. There are numerous theories assessing different aspects of violent crime, and the level of description achieved is quite high. However, there are also important limitations and almost all are related to a failure to specify a basic difference at the level of observation.

The debate on the importance of the level of observation has been treated more as a methodological cautionary measure than as a theoretically significant decision. It is certainly true that every researcher must make careful considerations on the level of analysis, such as the correspondence between the unit, phenomenon, and indicator to be explained. However, for the analysis of violent crime at an aggregate level, the difference between levels of observation is also a theoretical profitable differentiation to be made. This advantage comes from the premise that each level also contains mechanisms and interrelations between explicative factors that are, or might not be, extendable to other greater or smaller levels. For example, the mechanism that explains the variation of a type of violent crime at a national level depicts a process proper to this level of analysis only, and is not extendable or transferable to smaller levels, where the explicative mechanism could be substantially different.

This idea is based on James F. Short's proposal (Short 1997) about the existence of three dimensions of homicide as an important differentiation to be made in the sociological analysis of homicide. Short's idea was to reduce the unproductiveness related with some debates about the proper theory to explain homicide. In Short's view, the almost legendary disagreements between the arguments posted by a theory and their empirical validation could be significantly reduced if a conception of homicide as a three dimensional social phenomena is introduced: "Following the organizing logic that has been used throughout the book, we can locate 'causes' for violence at each level of explanation. Indeed, several causes have been identified at each level. Which causes are important depends on what we need to understand and what we wish to do with the knowledge. […] it seems clear that any theoretical package that purports to account for violent crime must include fundamental biological conditions and processes, learning mechanisms, and macro-level (environmental) conditions. I have suggested that the package ought, also, to include micro level processes. […] I want to

emphasize the mutually reinforcing nature of the macro-, micro-, and individual levels of explanation." (Short 1997:169)

In *Poverty, ethnicity, and violent crime*, Short's intention is more directed to the consolidation of an improved dialogue between contending explanations than an attempt at theoretical integration. Basically, his proposal tries to bring the macro and micro perspectives closer together by rearranging violent crime as a phenomenon with three dimensions. Each dimension portrays level-specific mechanisms with a level-matched explanation. Short's schema includes a tripartite differentiation of the dimensions of violent crime and their corresponding mechanisms. First is the individual level, where description and explanation are directed to the motives of individuals. The micro level is second with a particular focus on the interactions and outcomes from the relations between the social interaction participants. Finally, there is the macro level where the interest is placed on the relevant social context characteristics where social interactions take place.

The differentiation made by Short is a useful and mindful illustration of how a conceptualization of violent crime as a three dimensional problem can help us improve our descriptions, explanations, knowledge organization, and the communication between perspectives. However, a wider understanding of violent crime could be better assessed by making a slight modification to Short's schema. The division between the macro, micro and individual levels could be regarded as insufficient if we consider that there are mechanisms, processes and interactions that are not easily introduced in the three dimensional schema.

According to the existing explanations of violent crime, and the myriad of forms in which a set of explicative variables can give account of the outcome of violent crime, it would be convenient to consider the following schema. First, there is a macro level where long-term, historical processes modifying the structural characteristics of societies are related to the decline/increase of violent crime at the national level (long-term socio-historical processes). Second, a meso-level where social processes and mechanisms restricted to some geographical areas constantly modify the social contexts where the social interactions take place, and is identifiable in smaller units like cities (anomie/strain, Institutional anomie). Third, a micro level where the focus is directed to the social interactions between individuals, the socio-economic factors affecting them (social dis/organization, neighbourhood effects, general strain), and the places in which such events happen (e.g. communities, counties, neighbourhoods). Finally, there is an individual level where the analysis is centered on an individual's behaviour and his/her motivations to commit violent crime.

This differentiation is based on three factors: size of the unit of analysis, aggregation level of dependent and independent variables, and the type of mechanism (or unit of interaction) linking the variables. For example, the macro-level involves large-scale processes or mechanisms in a long period of time. On the meso-level there are a limited number of relations between variables, and on the micro-level, the relevant factors are the norms and material conditions affecting social interaction. At the individual level, the emphasis is on the generation of particular motivations or psychological states conducive to violent crime. This slightly different classification based on Short's work could be particularly beneficial for the general research on violent crime and may also carry positive repercussions in the comparative designs.

A more theory-oriented approach to the substantive differences within the levels of analysis is thought to unveil different characteristics of violent crime as a social phenomenon, for example, the difference between the approaches needed for the study of violent crime as an aggregate phenomenon and as individual phenomenon. The description and explanation of an individual's violent conduct (i.e. the possible factors influencing individuals' motivations for violent behaviour) requires a particular theoretical and methodological approximation. The research questions required to delve into the characteristics of violent criminal conducts are qualitatively different than the aggregate phenomena, because processes and mechanisms behind a motivational schema happen under very specific conditions that are not easily connected with the processes taking place at higher levels of observation. However, this does not mean that relations between levels do not exist, the happenings at the individual level are somewhat influenced by the outcomes coming from the micro- and meso-level, and therefore, the theoretical assessment of such links and the corresponding empirical test are one of the more important objectives for current social science research.

One important advantage of the specification of different levels of analysis implies that there are not only correlations to be described, but also mechanisms that are different at each level of analysis. The description of the relations taking place at a particular level of analysis is expected as a depiction of qualitatively and quantitatively different mechanisms between variables. According to this idea, if the mechanisms behind the variation of the national rates of homicide are different than the ones at community or neighbourhood level, it means that specific theoretical explanations are needed, and that a general theory of crime or violent crime it is not possible or, at least, a more integrative view should be considered, one that would incorporate particular explanations at every level of observation.

The basic premise of this idea is that one dimension cannot effectively fulfil the requirements of sufficiency needed to make the other explanations unnecessary. If this is true, then it will be necessary to post questions like: which instruments do we need to describe and understand mechanisms and processes that could be inherent to a particular dimension, but not extendable to others? How the conditions or functioning of the meso level may both limit and habilitate what is happening at the lower level and vice versa? It is of particular importance for the improvement of the available theories, and also as a basis or starting point for the new ones, to stress the relevance of this interdependence between levels, and include it as a constituent part of our theoretical framework.

This step could be especially beneficial to the micro and individual levels because if it is possible to identify those connections, it will also be viable to generate theoretical explanations more sensible to the modifications coming from the contextual connections. This in turn will be extremely useful for the construction of a comparative perspective capable enough to identify the specific mechanisms attached to different contexts.

IV.3. The meso dimension of violent crime and social strain

"Mechanisms connect variables to one another and put static models into motion" (McAdam, Tarrow et al. 2008:309)

The concept that I want to introduce is conceived as a depiction of socio-economic mechanisms and processes that, through time and in a particular geographic area, are probabilistically related with the increment and decrease of violent crime (homicide rates); or, staying close to the epistemological idea introduced in this chapter, social strain is the contextual configuration probabilistically associated with mechanisms and processes at the micro-level, which are conducive to the variation of violent crime rates.

Social strain is understood as the description of a contextual configuration that has been produced at the meso-level of observation, and it is not possible to find such outcomes in other levels because social strain is prototypical of the meso-level. To fully understand what social strain is, three steps need to be taken. First, identify a certain combination of socio-economic mechanisms in a particular time and geographical area. Second, make a description of the material conditions identified as social strain. Third, find the bridges connecting the contextual configuration named social strain with the other mechanisms and processes at the meso-level.

In this work, social strain is as a contextual configuration that can only be identified at the meso-level of observation, because it is produced by particular mechanisms and processes

that are found only at the meso-level. In general, the meso-level is characterized as: "structures revealing a division of labour (groups, communities, organization) and social categories (social class, ethnicity, gender, age, and the like)" (Turner 2006). In this level of analysis, the mechanisms and processes taking place are not sufficiently explained with structural changes, reconstruction, or analysis of social interaction. The phenomena taking place at this level are under the influence of middle-range factors (organizations, institutions, systems of stratification, etc) with a different functioning than the larger social structure and the smaller frame in which social interaction takes place. The ideas of social mechanisms and processes occurring at the meso-level come from a series of works about the inclusion of such terms in the social sciences, as a better depiction of social phenomena in view of the epistemological and methodological limitations related with the concepts of causality and correlation (Elster 1990; Hedström and Swedberg 1996; Hedström and Swedberg 1998; Elster 1999; Tilly 2001; Mayntz 2004; McAdam, Tarrow et al. 2008).

Based on this notion, a social mechanism refers to recurring processes linking some input with a particular outcome or a set of outcomes, and the mechanism is the specification of a differentiated (and limited) abstraction of those processes. This idea is only a general characterization of what a social mechanism could be. For the case of social strain, the concept of Renate Mayntz is particularly useful in understanding the extent of social mechanisms: "[…] most authors agree that mechanism statements are causal generalizations about recurrent processes. […] Mechanism accordingly 'are' sequences of causally linked events that occur repeatedly in reality if certain conditions are given." (Mayntz 2004:241)

This definition clearly illustrates the three basic "properties" or characteristics that need to be identified in order to recognize a social mechanism: causal generalization, regularity, and a set of given conditions. The most compelling feature of these characteristics, particularly for violent crime research, is the idea that a social mechanism is an abstraction, but not extendable enough to be a generalization in the tradition of covering laws or macro structures. On the contrary, a social mechanism is an abstraction of a limited number of links and should not strive to generalization, because social mechanisms are bounded to a limited number of connections in a determinate spatial and temporal framework (Elster 1990). This idea is quite attractive for comparative studies because it precludes the possibility of a context-free explanation, by emphasizing that social mechanisms involved with violent crime are more context-embedded than originally thought.

Finally, another advantage of social mechanisms is that they were conceived as localized, regular and limited processes linked with an outcome, they also include the

possibility, at least theoretical, of establishing connections with other mechanisms at the same or different level. They leave the door open to the conceptualization of greater links or relations with other theories to depict more complex social processes: "Similarly, they search for recurrent concatenations of mechanisms into more complex processes. Compared with covering law, propensity, and system approaches, mechanism- and process-based explanations aim at modest ends—selective explanation of salient features by means of partial causal analogies." (Tilly 2001:24)

IV.4. Putting social strain to work for the analysis of violent crime

"Indeed, no one has yet articulated or exploded how a wide array of crime-producing conditions (social, institutional, ecological, etc.) are embedded inequitably across geographic space in ways that are intricately connected with race and ethnicity, and, hence, with inequality and crime."
(Meier 2001:172)

According to the former sections, the basic idea is that social strain is a contextual configuration, meaning the material conditions influencing social interaction and everyday life, and is associated with social mechanisms at micro level. This combination represents a higher probability of higher rates of violent crime. We conceive violent crime as a sociological phenomenon possibly studied as a four-dimensional phenomenon (macro-meso-micro-individual), in which dimensions are not only connected in a horizontal way, but also as superimposed layers. Under this idea, if we are interested in the wider explanation of violent crime rates in a particular geographical area in a specific period of time, our research strategy would need to follow two steps: explain the mechanisms working or taking place at every dimension, and identify the connections and mutual influences between them.

Although this research strategy can be depicted as an ideal difficult to put in practice because of the acknowledged difficulties and limits related with such an ambitious research program, this ideal can be deconstructed or dissembled to its constituent parts in order to achieve a concentrated description and analysis of one dimension. The fundamental steps to make this localized analysis possible are to identify and stress the uniqueness of the mechanisms at one level, analyze them in terms of the fulfilment of necessary and sufficient criteria, and to include an explanation of the connections with other dimensions. In other words, one could answer the question, "How do the conditions specified at the macro dimension of an *x* phenomenon constrain the functioning of the mechanisms at the meso-level, and to what extent do the occurrences at meso-level also constrain the next dimension?"

According to this idea, I am interested in the identification and analysis of mechanisms affecting the variation of violent crime at the meso-level. I start from the premise that social mechanisms at the meso-level are a consequence of modifications at the macro-level and, in a similar sense, an influence or a delimiting factor of what is happening at the micro and individual dimensions. Social strain is localized as a social phenomenon generated by social mechanisms working in the meso dimension. As such, social strain can be defined and measured in two forms: through the mechanisms generating it or by identifying its crimiogenic consequences or effects. In this case, our interest is directed to the identification and specification of the processes and mechanisms composing social strain in a particular period of time and in a geographic area. I conceive of social strain as a concept reflecting the effects of a series of socio-economic processes in a unit of analysis, which tend to generate the structural and material conditions proper to the appearance of higher rates of violent crime. Social strain is understood as a compounded concept agglomerating the effects of socio-structural, economical and institutional changes across time.

To grasp a better understanding of the generation of social strain, one should also inquire about the form in which such mechanisms are working. Following this idea, the explanation of social strain, or any other social phenomenon at the meso-level, should also include the next elements in its descriptions and model specifications. First, the level of social strain does not only fluctuate according to particular specifications or combinations (mechanisms) coming from the institutional, social and economical structure. It also depends on the degree of concentration on specific geographical areas and social groups, a fundamental criterion in understanding the heterogeneous distribution of social strain across societies and groups of different socio-economic characteristics. Second, the concentration (or the intensity) of social mechanisms is also heterogeneously distributed in urban areas with specific characteristics. Third, the degree of social strain will be different according to the factor time, particularly in the form of time lags. Fourth, the usage of social mechanisms makes it possible to include the existence of mediation effects between factors, variables or mechanisms in the models.

IV.5. Social strain and economic conditions

As a sociological explanation of crime, social strain also considers the influence of economic conditions or economic related processes that are linked with homicide rates. However, the concept of social strain tries to make a different description of the way in which the economic factors affect the variation of violent crime.

According to the review made in the chapter on economic explanations, although social strain is not considered an economic explanation of crime, it does indeed recognize the place of economic phenomena in the aetiology of violent crime. As a sociological explanation at the meso-level and with particular interest in its application on the comparative analysis of criminal violence, social strain gives account of economical processes as factors of influence on the variation of criminal violence rates. The greater interest of this approach is oriented towards a better analytical description of the economic influences and their connections with social variables. Under the social strain perspective, economic conditions are not related with questions like: How does an economic variable (income, poverty, inflation) directly affect individuals' motivation to commit a violent crime? or to what extent is the motivation behind such criminal conduct associated with a rational evaluation of motives under the schema of fixed preferences and expected outcomes?

Social strain takes into account the influence of economic factors in a slightly different way. This socio-economic perspective at the meso-level of observation tries to identify particular points of mediation between economic conditions and socio-structural factors that may have a higher influence in the variation of violent crime rates. I do not consider economic factors as direct effects that can be satisfactorily included in an explicative model. My main hypothesis concerning economic conditions is that their influence on the variation of violent crime can be better assessed under the assumption that their effects are not homogeneously or randomly distributed, but rather disseminated according to the socio-structural configuration of a particular area.

In the second chapter, it has been suggested that a considerable amount of theoretical and empirical problems start with the extended assumption that economic effects act directly on crime through two mechanisms: the generation of sentiments of frustration, and the need of economic resources for survival. Although these links could be relevant for the explanation of individual conducts, they are not very illustrative of the involved mechanisms at the aggregate level. For this reason, social strain is conceived as the result of the interaction between economical, social and institutional variables.

The concept of social strain tries to illustrate non-direct influences between its components, as a way of taking distance from individual level processes. To make this possible, the following question needs to be answered: how can the economic effects be specified without making use of the conceptual associations between economic conditions and psychological states? One probable answer is the identification of how other variables, mechanisms or processes mediate the effects of economic factors in the alteration of

contextual configurations. The existence of interactions between economic and social variables has already been recognized as a relevant factor for the emergence of criminogenic contexts. As described in chapter II, although there are a wide array of theoretical explanations describing different relations between some economic factor and the appearance of criminal violence, it is also quite evident that the only relations that have performed well in the empirical tests are the hypotheses stating that the effects of economic factors are better assessed when they are maintained closer to the aspects of the social structure. One example is relative deprivation, and its closeness to the system of distribution of opportunities. Another is Blau and Blau's concept of "factors of adscription" as an illustration of how social stratification modifies the criminogenic effects of economic conditions.

Following these ideas, social strain includes this connection between economic and social aspects as a substantial part of its explanation of crime. The main challenge is the correct specification of the economic conditions affecting the creation of social strain through the following question: what is the role of economic conditions in the formation of social strain? A first step is the identification of the characteristics of the economy that could be considered as relevant, at least theoretically, to violent crime at the aggregate level. On this point, the literature has shown a clear group of aspects that can be accepted as significant elements in the chain of mechanisms connected with the formation of social strain. In a comprehensive meta-analysis, Pratt and Cullen (Pratt and Cullen 2005) have found that the economic dimension of violent crime is clearly represented by four indicators regularly included in the studies, and with acceptable levels of significance in the empirical tests: "These predictors included income based measures of socioeconomic status; poverty (including separate categories for the percent below the poverty line vs. a poverty index); inequality (including separate categories for whether inequality was measured as racially homogeneous of heterogeneous); and unemployment (including separate categories for whether the length of unemployment was considered and for whether an age restriction was included in the measure)." (Pratt and Cullen 2005:391)

A second important criterion to follow is to maintain a correspondence between the economic aspects to be chosen and the proper level of analysis. Mixing concepts or indicators not related with the level of interest should be avoided. In this case, social strain is localized at the meso-level and therefore the mechanisms behind its emergence are also localized at the same level. Therefore the identification and description of the economic components of social strain requires the description of the mechanisms relating economical factors (economic inputs in Renate's terminology) with the emergence of social strain. In this case, I am

interested in the process related to the modification of the economies and economic conditions of urban and semi-urban areas, that is, the local aspects of the economy.

If one is interested in the depiction of the processes and mechanisms behind the construction of social strain, in order to identify and differentiate the relevant factors of the economic dimension, the first step should be the identification of the Ascribed Economic Conditions (AEC). The AEC would function as my operative concept to describe the economic effects. However, it is not an indicator of a direct effect of the economy; on the contrary, the AEC is a concept strongly coupled with the social structure to grasp the effects of the economy through the factors of ascription of a particular social unit.

What are the factors of ascription? In the work of Blau (Blau and Blau 1982; Blau 1986) the factor of ascription is race in the form of racially ascribed inequality, and the basic idea is that inequality alone did not work as a relevant factor. However, things can be different if we are capable of finding the elements of the social structure strengthening inequality. The idea of ascribed or consolidated effects came from an earlier work on inequality (Blau 1977), where the distribution of opportunities in a social structure is conceived from three concepts: heterogeneity (distribution of nominal groups like race), inequality (hierarchical ordered distribution like income inequality), and the correlation between two or more differentiations resulting in consolidated status distinctions. In other words, the coupling between a dimension of heterogeneity and inequality make the differences between statuses bigger and more defined. In Blau's framework, this combination was sociologically relevant because it produced particular positive and negative outcomes. The positive outcomes are related to the consolidation of higher positions in the society, while the negative implied intense situations of disadvantage. For the case of crime and violent crime, the negative outcomes are of particular interest because the effects of consolidation are closely connected with the decomposition of the material conditions of everyday life at the base of the concept of social strain.

My specification of the economic components of social strain is based on the existence of AEC, which represent two coupled elements from the economy and the social stratification system. These two aspects are the constituent parts of what I have identified as the economic dimension of social strain, which is no more than the processes and mechanisms that represent the pervasive effects of the economy on the constitution and consolidation of contextual configurations that might increase the probability of higher violent crime rates. The objective of the AEC is to introduce a strategy to detect the national and local differences concerning the form in which the modifications on the economy are generating crimiogenic contexts. I

depart from the assumption that the distribution of goods and wealth is different according to national and local historical patterns, and such patterns can be accurately reflected with the support of the concept of AEC. If this idea is true, a difference between the AEC in countries like the USA and Western European nations would be expected, as a reflection of different historical patterns. In the USA, the relevant AEC for social strain and violent crime is the racial-based inequality, or relative deprivation ascribed to race. However, in view of differential historical patterns, the AEC of Western European nations could be related to other socio-demographic characteristics like: class-membership, migration, social mobility, etc.

Recapitulating, I have outlined the findings of the sociological and criminological literature, and concluded that economic conditions have an important weight in the creation of criminogenic contexts where violent crime rates are, or tend to be, higher. However, I have also explicitly described the critiques, problems and limits related to the specification of the influence of economic variables. As an alternative to these limitations and based on Peter Blau, I postulate that it is not the direct, but rather the consolidated effects through the AEC that can better assess economic effects, and its differences according to national and local characteristics. The AEC are the fundamental part of what we have called the economic dimension of social strain, which is no more than the group of processes and mechanisms essential in the construction and consolidation of social strain.

One primordial objective of my work is to design a proper framework for its application in comparative research to identify the (lack of) existence of differences between units. I expect to find different combinations of AEC as an account of different historical patterns. Therefore, I expect a variation on the coupling between the specified economic characteristics and the factors of ascription; I call this possibility the first general hypothesis of social strain.

Notwithstanding the importance of the economic dimension on the appearance of criminogenic configurations like social strain, it is also extremely relevant to say that the economic dimension or AEC is constantly under the effects of social and institutional characteristics that might mediate the harshness of the material living conditions. The two factors to consider are opportunities structure and institutional support at the meso-level. This is the second important step in the chain of mechanisms generating social strain, and is the connection with the structural and institutional elements influencing the probability of violent crime.

IV.6. Mediating factors: opportunities and institutions

To continue with my description of the mechanisms behind the emergence of social strain, I put forth the second hypothesis of social strain namely, that the ascribed economic conditions are mediated by two social factors: opportunities structure and institutional support. The general idea behind this hypothesis is that the AEC is a necessary, but not sufficient, condition for the formation of social strain. For that reason I need to find the factors that might represent the complementing mechanisms involved on the formation of social strain.

My second general hypothesis involves two social factors of mediation: opportunities structure and institutional support. Both concepts are closely connected with the tradition of anomie and strain; however, the processes that they try to account for are differentiated. To define these concepts and their differences, I begin with the concept of opportunity structure.

IV.6.1. Opportunities Structure

As mentioned in chapter III, the concept of opportunities structure has its origins in the work of Merton. In his earlier works (Merton 1938; Merton 1964; Merton 1968), it was not present as a clear component of his anomie-strain theory because the concept was subjected to a constant process of reformulation, differentiation and maturation that culminated in a latter work which opportunities structure was defined: "[…] not only were the socially structured differentials in access to the opportunities that then and there did exist but that the scale, character, and distribution of those opportunities which formed objective conditions affecting the probability of successful outcomes of choices were subject to varying rates and degrees of structural change that differentially affect those variously located in the social structure. […] the sociological concepts of opportunity and opportunity structure are generic; they are not confined to economic opportunities or to opportunities for social mobility." (Merton 1995:28)

In the earlier days of the anomie-strain theory, opportunities structure was not clearly present in Merton's schema, because the social structure, or more precisely the position on the social structure, explained the differentials on opportunities in the society. The distribution and organization of social positions was a function of the social structure, and Merton theorized that those positions were associated with a differential access to approved opportunities of economic realization. Because the positions in the social structure were neither evenly nor randomly distributed, then the associated opportunities were also distributed in the same form. For example, in the case of the USA, white middle-class positions were associated with more approved opportunities for economic success while black lower-class sectors had reduced access.

The idea of differential access to opportunities was the initial concept from which the socio-structural elements of the anomie-strain theory were going to be further developed, and subjected to substantive modifications.[39] In his text of 1995, Merton qualified the evolution of the concept as an intermittent effort going from a seminal text (Merton 1938), to a definitive elaboration of the concept, as a recapitulation of the phases of his deviance theory from the eyes of the sociology of science. In the long run toward its final definition, the original concept adopted several differentiations.

The first and most important differentiation made to the concept was the conceptual separation between differential access to opportunities and opportunities structure. This step was supported by four fundamental modifications of the concept: 1) the first version of the concept was closely connected with the idea that the differential access was determined by the position on the social structure, and this was represented by class membership. This idea changed in further developments of the theory where Merton established that group membership could also be a determining factor on the heterogeneity in the access to opportunities; 2) the extension of the structured access to opportunities with the inclusion of constraint, where the distribution of opportunities is not only a factor of restraint but also creates options of adaptation, i.e. a closure that also generates an opening; 3) the identification of a correlation between the "differential access to legitimate opportunity" and the "legitimate opportunity structure"; 4) the socially structured distribution of opportunities was not static but dynamic in the sense of a structure that in a *x* period of time could expand or contract. These four points were the basic modifications from the initial concept of 1939 to the final version of 1995. A later and final differentiation of the concept was the separation between legitimate and illegitimate opportunities structure, an important improvement largely made with the contribution of Cloward and Ohlin (Cloward and Ohlin 1960) to the anomie-strain theory.

The final concept of opportunities structure entails an explication of the socially structured factors conducive to anomie and strain. The socio-structural component of the anomie-strain theory is an explanation of how social structure positions, whether class or group, are connected with the differential access to opportunities, meaning the structural orientation of social behaviour, and how the structural context restrains or creates the possibility of outcomes. According to Merton, the differential access is a correlative of the

[39] Reviewing the road taken from the earlier writings to the last comments on the theory, Merton appeared to be more concerned on the improved differentiation of the factors or elements of the social structure than the ones of the cultural structure. If we think about the anomie-strain theory as an explanation generally based on two constituent elements of modern societies namely, social structure and cultural structure; it can be said that the aspects derived form the social structure were more developed than the cultural structure.

opportunities structure, understood as the scale and distribution of legitimate and illegitimate opportunities: "socially patterned differentials in […] relative accessibility to the goal: life-chances in the opportunity structure." (Merton 1968:229)

Founded on this concept, the second general hypothesis of social strain expects to find a mediation of the effects of AEC through the opportunities structure of a social unit. The association is based on expectancy of an increased probability of violent crime if the AEC are not positively mediated by the opportunities structure of a social unit.

IV.6.2. Institutional Support

The second factor contained in our second hypothesis is related with the role of institutions in societies, and how particular configurations can be somehow related with the problem of violent crime. As mentioned in chapter III, my interest is mainly based on the arguments proposed by the Institutional-Anomie Theory (IAT) of Messner and Rosenfeld (Messner and Rosenfeld 1997; Messner and Rosenfeld 1999; Messner and Rosenfeld 2004; Messner, Thome et al. 2008; Messner and rosenfeld 2009). The basic motivation behind the IAT was the improvement of Merton's anomie-strain theory by including the role of institutions as a complementary factor influencing the emergence of anomie in modern Western societies. The point of departure of the IAT is that institutional configurations as well as Mertonian opportunities structures are responsible for the creation of anomic contexts.

Together with the work of Merton, the IAT also hinges on the classic arguments of Durkheim and Parsons (Messner, Thome et al. 2008), and coincides with the appearance of the new institutionalism approach in the social, economical and political theory of the 1980s. To expand the structural sources of anomie identified by Merton, the IAT introduced the importance of the institutional framework as a primordial source of the control and transmission of values contained in the cultural structure. The connection with anomie and crime is made through the alteration of the institutional balance of power understood as the result of the structural dynamics between social and cultural structures.

The institutional balance of power is a representation of the interdependence of all institutions of society, and particularly of the struggle or "competing demands" (Messner 2003) of conduct orientations between the economy and the pro-social institutions (polity, family, education and religion). The key feature of the IAT is to explain the particularly high rates of violent crime in the USA as a shift on the institutional balance, when the economy tends to dominate (*sic*) the equilibrium. The IAT identifies the domination of the economy in three ways: the *devaluation* of non-economic roles; *accommodation* or the supplanting of

non-economic roles for economic roles; and the *penetration* of economic meanings and values into other institutions (Messner, Thome et al. 2008). Acting together with the anomic disjunction on the cultural structure, these structural conditions provoke a failure of the institutional framework, limiting the transmission of pro-social institutional orientations of conducts, and lessening institutional bonding and control. This is how the analytical model of the IAT tries to explain the appearance of criminogenic contexts from processes originating in the cultural and social structure of Western societies particularly in the USA.

Although it is still a young theory, since its debut in 1997 to its appearance in recent articles (Messner 2003; Messner and Rosenfeld 2004; Messner, Thome et al. 2008; Messner and rosenfeld 2009), the IAT has been constantly improving its theoretical arguments, shifting its theoretical background, assessing critiques, and making sense of the gathered empirical evidence. There are several interesting points that can be extracted from this process, however, for my own interest, the IAT has unveiled an important aspect of Western societies that might help to explain other important factors in the formation and consolidation of social strain. One of the most appealing arguments derived from diverse empirical tests (Chamlin and Cochran 1995; Piquero and Piquero 1998; Savolainen 2000) is that the predominance of economic institutions or the strength of pro-social institutions might in fact mediate the pervasive effects of well-known economic conditions (i.e. poverty, economic inequality) necessary for the appearance of criminogenic contexts.

Together with the opportunity structure extracted from Merton's formulations, the institutional framework, understood as the institutional balance of power of the IAT, could add a useful element in understanding the creation of social strain. The connection between the AEC and the formation of social strain contexts might be conditioned not only by the expansion-contraction of the opportunities structure, but also by modifications to the institutional configuration, where social units prone to the economic institutions (or in IAT terms: dominated by the economy) may increase the probability of the emergence of criminogenic contexts.

As in the case of opportunities structure, we expect to find that the AEC are also being mediated by institutional support. Based on the theoretical and empirical work on the IAT, my second hypothesis states that the AEC increases the probability of violent crime in a social unit if there is an institutional framework dominated by the economy, and the probability is lower if pro-social institutions are present.

IV.6.3. The spatiotemporal effects

Together with opportunities structure and institutional support, the contextual configuration called social strain is formed by the effects of temporal and spatial factors. Time and space are fundamental for the consolidation of social strain as a criminogenic context related with violent crime. The consideration of time and space on the model will help to differentiate between temporal and spatial conditions and their relationship with the formation of social strain.

This idea is based on several assumptions adopted from theoretical arguments, and empirical evidence in the research literature (Land, McCall et al. 1990; Chamlin, Grasmick et al. 1992; Land, Cantor et al. 1995; Pratt and Lowenkamp 2002). For the case of time, my main assumption is that any assessment of the explicative variables affecting the variation of violent crime will be incomplete and limited if temporal effects on the independent variables are not considered. The most recognized temporal effects on the independent variables are lagged effects, or time lags. These temporal effects are recognized as the delayed effects of a variable, meaning that a variable *x* might not show its effects immediately, but rather at a future point (i.e. the influences of the increase of 1995 unemployment rate might be not criminogenic in that year, but its effects might have a lag extended into the next years).

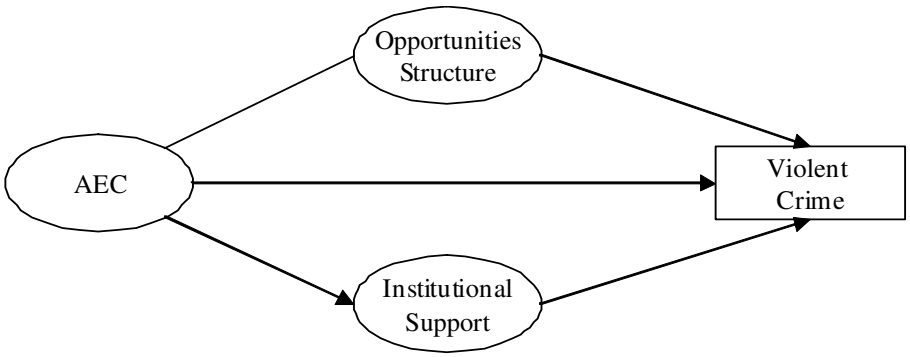
For the case of spatial differences on the effects of independent variables, I adopt the perspective based on the existence of qualitative differences according to different measures of size and density in the unit of analysis. Concerning size, there is an acknowledged difference between the significance showed by an independent variable in highly aggregated (countries, cities) and less aggregated units (counties, districts). The reasons behind these differentials are a good example of the importance of the connection between theoretical and empirical work. An interesting example is the role of family composition and violent or property crime. In social disorganization theory and control theory, distinctive measures for family status are used. For different reasons in each theory, a stable family structure is a factor that is related with a lower incidence of crime (through informal control, socialization, supervision, etc). However, the empirical support for this assertion is only strong in smaller units, while in larger units its significance disappears. According to the theoretical fundamentals, family structure can be relevant only in units where the frequency of significant social interaction and contact in a particular area is high, and in the case of smaller units, the density of people interacting on daily basis is better assessed than at a national level.

So with the consideration of the spatiotemporal effects in the model of social strain, I try to illuminate some aspects of the process of formation of criminogenic contexts that have not been sufficiently present in the research literature. The main objective of this approach is

the clarification of patterns of concentration, meaning the processes and the spatiotemporal aspects involved in the consolidation of social strain in particular units of analysis. With the processes related with AEC, opportunities structure and institutional support, and the inclusion of the factors time and space, I hope to find not only stable and strong associations with the variation of violent crime, but also different processes, meaning different combinations of the relevant factors, that might be a reflection of differential levels of social strain.

Based on former considerations and arguments, my final depiction of a model of social strain as a proper criminogenic context for higher violent crime rates is:

Figure 2: Model of Social Strain.



Conclusions

In this chapter, I presented the basic arguments in favour of social strain as a proper theoretical instrument to grasp a different perspective on the social roots of violent crime rates. To make this possible, I have distanced myself from the standard conceptualization of how the contextual effects work in the variation of violent crime rates. It is already recognized in the research literature that different manifestations of deviant behaviour like crime and violent crime are strongly rooted in the social world, however, I strive to include two novel ideas in the sociology of crime that may contribute to a wider sociological understanding.

The first idea reaffirms the social embeddedness of crime, not only in specific contexts, but also at specific levels of observation. I differentiated sociological explanations of crime by identifying mechanisms that are particular to a level of observation. In other words, depending on which dimension of the phenomena is considered, there are different mechanisms behind the same criminal act. The second criterion deals with the necessity of assessing the connection between dimensions not only as a factor of differentiation, but also as a kind of flux of causality; by considering the connections between dimensions, we may have a better perspective of the probability changes behind violent crime.

With these ideas in mind, the specificity of a mechanism and its connection between dimensions, I seek to deconstruct some constituent parts of this chain of mechanisms to explain only a facet of violent crime. I identify social strain as the resulting contextual configuration emerging from the operation of social mechanisms at the meso-level of observation, and as a connecting factor between macro and micro explanations. I am not only interested in the assessment of the generation of social strain, but also its distribution across societies.

My description of social strain is based on the identification of its generating social mechanisms in a particular period of time and geographical area. I identified three basic mechanisms needed for the emergence of social strain: the consolidation of Ascribed Economic Conditions, the expansion and contraction of the opportunities structure, and alterations in the institutional support framework. I also introduced a qualitative differentiation between the mechanisms, namely, that the effects of the AEC are considered the main effects and the opportunity and institutional mechanisms mediate the AEC and the emergence of social strain.

From this difference, I posed two hypotheses of social strain. The first refers to the economic dimension or the AEC, and specifies that a necessary feature for the emergence of social strain is the coupling between economic characteristics and social stratification. The principal objective of this hypothesis avoids the psychological fallacy related to the economic dimension of crime and violent crime. I want to explore the connection between economic factors and stratification to discover the national and local patterns of economic distress associated with social units as a way of explaining the effects of the economy in social aggregates without resorting to individual-based arguments. The second hypothesis of social strain explores how the pervasive effects of the economic dimension are influenced by other constitutional aspects of developed Western societies. My hypothesis states that the AEC are mediated through opportunities structure and institutional support. With these two assertions, I test the existence of economical and social processes as significant factors in the creation of social contexts with singular criminogenic characteristics, by the alteration of the material conditions surrounding and structuring social interaction, which represent a higher probability of violent crime.

In this chapter, I sought a line of argumentation to theoretically justify the increment on the probability of violent crime in social strain units. The first sketches of the argument indicate that the material conditions generated by social strain (economic distress, lower access to opportunities and weaker institutional support) are somehow contained as relevant factors in other theoretical explanations (i.e. social disorganization, social control, neighbourhood disadvantage, and sub-cultures). The principal difference is that inside such explanations, there is not an explicit differentiation between the levels of analysis and their corresponding particular mechanisms. In this case, I seek a clear differentiation that will automatically profit form clearly delimiting the frontiers of the meso-level, and identify the possibilities of connections between levels.

My intention is to put forward the necessary arguments to justify the idea of a probabilistic association between particular social phenomena at the meso-level (i.e. social strain) and mechanisms at the micro-level (i.e. decomposition processes of the nuclear family, deficient socialization, and informal control of young cohorts). After identifying and improving the description of the meso-level mechanisms, the work of the researcher interested in crime and violent crime should be directed to the explanation of these expected probabilistic associations. In other words, future research would identify not only the probability of these connections, but more importantly find a way of explaining how these modifications are possible.

In the existent literature, there are well-documented examples of these connections between mechanisms at different levels. A good illustration is Elijah Anderson's book *Code of the Street* (Anderson 1999), where material conditions produced by mechanisms similar to social strain are linked with other criminogenic mechanisms at the interactional level, such as alienation, a process identified by Anderson as a strong criminogenic factor concentrated in urban areas.

If we consider the contextual characteristics associated with social strain, communities, groups, and people are constantly subjected to social distress stemming from the blockage of opportunities, and the absence of institutional support. However, in terms of its effects on social interaction, this condition of social distress also fosters ruptures with mainstream society. Socially strained areas are fertile ground for the emergence of alienation mechanisms, because social strain increases the separation with other sectors due to the depletion of opportunities, material conditions of living, cultural values, and organizational capacities. Under these conditions, social strain can be considered as a factor conducting to localized processes and mechanisms of alienation.

The connection between strains and the code of the street as an adaptation emanated from structural sources (Brezina, Agnew et al. 2004; Miller 2005) and is also considered a motivating example of the link between dimensions. There are other examples illustrating the importance of these connections. Some important contributions are: the work of William Julius Wilson on the criminogenic effects of concentrated disparities and social isolation from mainstream patterns of behaviour (Wilson 1987); the research of Robert J. Sampson on the effects of neighbourhood disadvantage (Sampson, Wilson et al. 1995; Sampson, Morenoff et al. 2002; Sampson 2008); the study of Pridemore about the social sources of homicide in non-Western societies (Pridemore 2006; Pridemore, Chamlin et al. 2007; Pridemore 2008); as well as the most recent publications on the IAT (Messner, Pearson-Nelson et al. 2008; Messner and Rosenfeld 2008; Messner, Thome et al. 2008; Messner and rosenfeld 2009). The research on the IAT has inspired others to think about the role of the structural-institutional sources through other theories: "These leads to weak institutional controls-with the exception of the permissive "controls" emanating from a free-market economy-and meagre institutional support which can be linked with crime via classical social disorganization theory and social support theory" (Messner and rosenfeld 2009:130). These publications have also provoked other researchers to explore the dimensional connection as a strategy towards theoretical integration with other perspectives: "A more fruitful approach is to ask how features of the institutional environment act in concert with individual propensities to account for the

systematic patterning of crime across time and space" (Messner and Rosenfeld 2008:101). My concept of social strain is one part of these efforts that at hand of theoretical arguments and empirical evidence seek to identify and differentiate the social mechanisms that may be connected with the micro-level of phenomena like crime and violent crime.

V. Social Strain and Violent Crime Rates in Europe (2001-2006)

In the preceding chapters I presented the theoretical structure of an alternative concept to understand new aspects of the contested link between social context and violent crime. My strategy is based on the design of a concept that would improve the dialogue between theory and comparative research.

One advantage of social strain comes from the fact that its general structure has the property of capturing different contextual configurations. The concept is designed with three basic components namely, Ascribed Economic Conditions, Opportunities Structure and Institutional Support. This basic configuration is a particular articulation of the components of social strain and is the starting model from which alternative configurations can be identified.

The concept of social strain has been created to improve the comparative research of violent crime. However, it does not pursue the application of a confirmative approach but an explorative one. My research strategy follows two methods: first, a confirmatory approach on the existence of social strain components in a sample of social units, and second an explorative approach to detect different articulations between components according to a particular context. To achieve this two-fold objective, I have specifically conceived social strain as a conceptual instrument capable and flexible enough to: contain the basic contextual components linked with criminogenic contexts, and to give enough space to detect differential articulations of the same components.

The three components and their basic articulations are based on a comprehensive review of criminological and sociological theories of crime. Their objectives are to explain the spatial distribution of violent crime rates in a comparative perspective. The components of social strain are differentiated according to two functions: exogenous and endogenous. The exogenous components are independent variables representing structural characteristics of a context. To qualify as an exogenous component, the considered variables need to be acknowledged in the theory as relevant sources of input in the emergence of criminogenic contexts. On the other hand, the endogenous components are represented by those independent variables in the model, whose presence may affect the exogenous components on the appearance of criminogenic contexts, and a higher probability of violent crime.

In the confirmative approach, I will try to find some empirical support for the original configuration of social strain. For the first configuration, the exogenous part is represented with the component Ascribed Economic Conditions (AEC), while the endogenous will be Opportunities Structure (OS) and the Institutional Support (IS). If the first model is not supported in the confirmative approach, I will begin an explorative approximation. Through

the variation of the components, I will try to find a different articulation that within the limits of social strain could be identified as criminogenic characteristics of the social units under study.

V.1. Ascribed Economic Conditions

The Ascribed Economic Conditions (AEC) relies on the idea that economic variables are not a sufficient explanation for the formation of criminogenic contexts if the corresponding factors of ascription are not taken into account. These factors entail some characteristics of the stratification structure that, when combined with an economic aspect like income, acquire its criminogenic characteristics. A classic example is the combination of low income and ethnic-group membership. In a particular urban context, this combination results in a higher probability of crime because the AEC is directly connected with other social processes behind the emergence of criminogenic contexts.

One advantage of the AEC concept is that the named connection between economic aspects and stratification is historically conditioned, meaning that one combination cannot be arbitrarily applied to social contexts where the processes of stratification have followed different historical paths. For example, in the United States, economic inequality and poverty have been largely linked with historical patterns of ethnic discrimination, resulting in a particular configuration of AEC connected with criminogenic contexts. However, countries with different historical paths of stratification will also have distinct pairs of AEC. For the European context, and specifically the countries included in my research, the AEC cannot be the same as in the USA because of differential historical patterns. To find the correct factor for the European countries we need to look into other characteristics like: urbanization settings, migration trends, educational past, and welfare between others.

An empirical study with the component AEC needs to include economic elements and social stratification elements. For the identification of AEC we need to find a group of at least two indicators grouped into two factors: Stratification Factor (SF) and Economic Factor (EF). A second condition for AEC is that its factors must be correlated. If two factors are identified but it is not possible to identify a connection between them, then the used indicators are not appropriate for the concept of AEC. In other words, to find empirical support for the component AEC, two hypotheses need to be tested. First, there is an association between no less than two indicators and the corresponding AEC factors. Second, there is a significant connection between the two factors.

V.2. Opportunities Structure

The second component of social strain is the Opportunities Structure (OS) and is the first mediation component of social strain. OS comes from the latter reformulations of Merton to his anomie-strain theory of deviant behaviour. As a component of social strain, the OS reflects the distribution and availability of chances of economic success for the inhabitants of a particular area.

Merton's original concept of opportunities structure is based on the existence of contextual characteristics as factors determining the probability of achieving economic stability. In Merton's formulation the two most relevant aspects are related with employment conditions and educational chances. In the framework of social strain, the OS is a mediator of the effects coming from the AEC. The basic idea is that the probability of a criminogenic context is not exclusively limited to the conditions emerged from the AEC.

Similar to the AEC, the OS is a component constituted by two factors: Labour Conditions (LABC) and Education (EDU). Each of them needs to be significantly associated with the proper indicators, and there should be a connection between the factors. According to this, the OS also needs to fulfil the following hypothesis: first, the factors LABC and EDU have a significant association with their corresponding indicators; second, the factors LABC and EDU are linked through a statistically significant association.

V.3. Institutional Support

The second mediation component of social strain is Institutional Support (IS). In general, this is conceived as the institutional framework of a region whose work helps to reduce the pervasive influence of the AEC in the formation of crime-prone contexts. Its theoretical basis is the Institutional-Anomie theory, and the focus is concentrated on the role of pro-social institutions to thwart the effects of adverse economic conditions in the formation of crime-prone contexts.

The Institutional-Anomie theory describes the institutional structure of Western-industrialized societies, as a field where economic institutions and political institutions are in constant competition to impose their commanding values and orientations. A state of Institutional-Anomie will come forward when the actual configuration, or in IAT terminology: institutional balance of power, is dominated by economic institutions. Such misbalance is a proper condition for criminogenic contexts, because the social-institutions cannot lessen the effects of economic hardship through the institutional framework. There are various forms in which social-supportive institutions can be present in a social context. To

identify the presence of supportive institutions, the proponents of the IAT have focused their attentions on welfare, political participation, and civic engagement, among others.

Like other components, Institutional Support would have been better represented with more than one factor. However, it was not possible to find proper data to generate more than one factor. I have managed to find complete data on only one aspect of Institutional Support, namely, taxes and returned social benefits. For this reason, this will be the only component with one factor. According to this, the component IS needs to be represented by at least three indicators. The hypothesis of IS implies the existence of a significant association of the indicators with the corresponding factor (view appendix for the definitions of all the indicators).

V.4. The structural model

As already mentioned, the social strain model includes not only three components, but also the relations between them. The structural part of the model explains the connections between the input component or exogenous independent variable (AEC), and the mediator components or endogenous independent variables (OS and IS). The underlying idea is that in a contextual configuration where the three components are present, there is substantive difference in the position each component occupies. The original formulation of social strain places the input sources on the side the AEC, while the mediators are represented by the corresponding factors of OS and IS.

The first relationships to be acknowledged are the direct paths from the AEC to the dependent variable. For these relationships, we can derive two initial hypotheses:

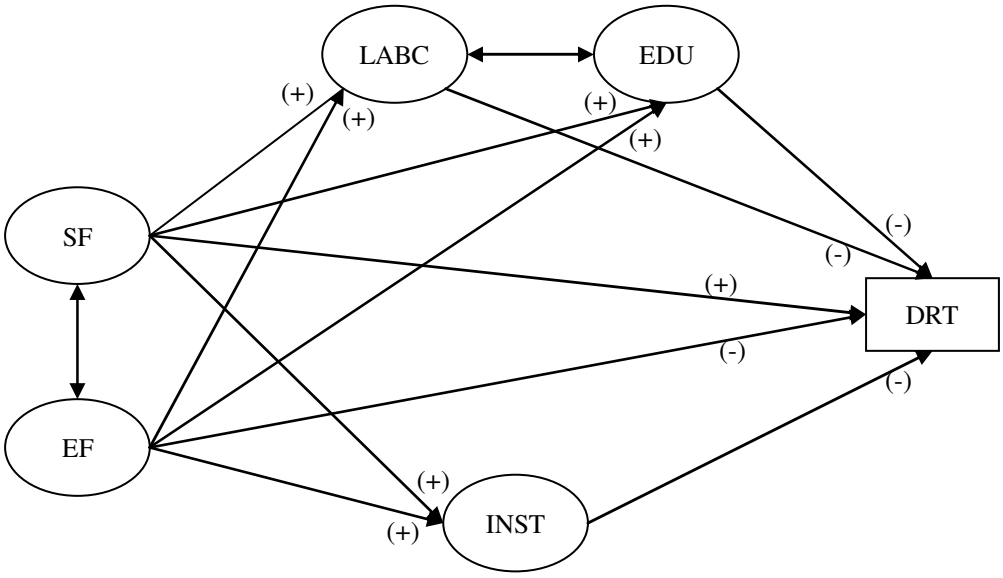
1. The SF factor is positively associated with death rates, meaning that intense conditions of social segregation are conducive to higher death rates.
2. The EF factor is negatively related with death rates, where higher scores of income and wealth are linked with lower death rates.

A second group of paths is needed to include the mediators and their effects on the dependent variable. The effects of AEC on the mediators and their corresponding effects on the dependent variable are represented in the following hypotheses:

1. The factor SF is positively associated with LABC and EDU.
2. The factor EF is positively associated with LABC and EDU.
3. The factors SF and EF are positively associated with the factor INST.

4. The factors LABC and EDU are negatively associated with the variation of death rates.
5. The factor INST is negatively associated with the variation of death rates.

Figure 3: structural model of social strain



V.5. Data

To make a comparative study of crime rates in Europe possible, one difficulty to overcome is the data.[40] For the case of Europe, the availability of highly aggregated data is well extended, and the information is easily accessible in the corresponding national statistics offices. On the contrary, access to disaggregated data beyond the national level is more difficult. According to my own review of available sources, there are only two sources of disaggregated data: Urban Audit and Eurostat Regional Statistics (ERS) (EU 2010).

The Urban Audit is a project to collect, organize and maintain data on the quality of life in European cities. The database contains a wide array of information about the socio-economic aspects of urban life. However, although the data covers a period of time from 1989 to 2006, divided into four reference periods (89-93; 94-98; 99-02; 03-06), the available data for core cities is only for the 99-02 and 03-06 periods.

The ERS encloses information on causes of death by homicide. The principal advantage of Eurostat is its wider time period (1994-2004) and geographical coverage (15 EU

[40] Generally, institutions and services in charge of official crime statistics in the EU member states do publish their data exclusively on highly aggregated spatial levels. Crime data of higher spatial detail, in contrast, is normally only available on request and may require non-routine (mainframe) evaluations on the part of the relevant agencies.

states at NUTS-2). The principal problem of Eurostat is that the data on Causes of Death (COD) is based on the International Statistical Classification of Diseases and Related Health Problems (IDC-10) of the World Health Organization (WHO). In the IDC-10 the categories of death by homicide and assault are merged into one category, making impossible to create a differentiated indicator of homicide. However, this is a minor problem which did not diminish the possibilities of the database (view appendix for data sources).

The ERS is an effort by the European Union to collect high quality information about the principal aspects of economic life and social life in the European Union, including demography, economic accounts and labour market data. The concepts and definitions used in the construction of indicators and measures are as close as possible to those used at national level.

The ERS contains aggregated data at three different regional levels. Eurostat used a regional breakdown based on the existence of administrative boundaries and structures. In other words, the different regional levels reflect real and effective administrative divisions between regions (or regions as an administrative concept). The ERS data uses the 1970 classification Nomenclature of Statistical Territorial Units (NUTS, for the French *nomenclature d'unités territoriales statistiques*) as a single, coherent system for dividing up the European Union's territory.

The NUTS classification favours the institutional division between regions as a normative criterion of differentiation. According to this, this division is designed to: "[…] reflect political will; their boundaries are fixed in terms of the remit of local authorities and the size of the region's population regarded as corresponding to the economically optimum use of the resources they need to accomplish their tasks; historical factors may also be at the root of an agreement to maintain the autonomy of certain administrative divisions." (Eurostat 2009:4) The existent NUTS classification was adopted in 2003 and has changed over time[41]. It is still open to modification in case of the expansion of the EU and institutional changes in each Member State. Finally, Eurostat gets this data from each country's National Statistical Office and is subjected to validation processes by the Eurostat thematic units' personnel. The data is then loaded into Eurostat's statistical databases by the thematic unit in question.

[41] The regions have been subjected to amendment in 2005, 2007 and 2008

Table 1: Average size of regions NUTS 1-3.

Average size of NUTS regions (in 1000 population) 2005			
	Level 1	Level 2	Level 3
Austria	2,755	918	236
Belgium	3,504	956	239
Finland	2,628	1,051	263
France	6,987	2,419	629
Germany	5,152	2,114	192
Greece	2,781	856	218
Ireland	4,159	2,105	526
Italy	11,750	2,798	549
Netherlands	4,084	1,361	408
Portugal	3,523	1,510	352
Spain	6,251	2,303	742
Sweden	3,016	1,131	431
United Kingdom	5,033	1,632	454

Table 2: Average size regions NUTS-2.

	Pop 99	Area km2	NUTS2	NUTS2 (study)	Pop/#NUTS2	Area/#NUTS2
Austria	8,177,000	82,444	9	9	908,556	9,160
Belgium	10,152,000	30,278	11	11	922,909	2,753
Finland	5,165,474	304,473	6	5	860,912	50,746
France	59,099,433	640,053	26	22	2,273,055	24,617
Germany	82,087,000	349,223	40	34	2,052,175	8,731
Greece	10,626,000	130,800	13	13	817,385	10,062
Ireland	3,744,700	68,890	2	2	1,872,350	34,445
Italy	57,343,000	294,020	20	20	2,867,150	14,701
Netherlands	15,810,000	33,883	12	12	1,317,500	2,824
Portugal	9,988,520	91,951	7	7	1,426,931	13,136
Spain	39,418,017	499,452	18	18	2,189,890	27,747
Sweden,	8,857,361	410,934	8	8	1,107,170	51,367
United Kingdom	58,744,000	241,590	36	32	1,631,778	6,711

Table 3: NUTS population thresholds.

	Population	
Level	Minimum	Maximum
NUTS-1	3 million	7 million
NUTS-2	800,000	3 million
NUTS-3	150,000	800,000

V.6. The regions of Eurostat

The effort of Eurostat is an important first step to disseminate reliable regional information for policy and scientific purposes. However, the differences between regions according to the administrative structure are based more on quantitative criteria than qualitative criteria. The hierarchical regional division could be quantitatively specified, but the classification is not complete without a qualitative dimension. These are its principal shortcomings:

a) The existent NUTS-based regionalization cannot sufficiently portray the differences between regions in more centralized politic-administrative systems (as in France) and stronger decentralized systems (as in Germany and the autonomous regions of Spain). This qualitative difference cannot be sufficiently explained with the administrative structures, because they do not reflect their real positions within the whole institutional structure. For example, from the quantitative point of view, the French *départements* and the German *Kreise* are included in the same category (NUTS-2), however, it would be deceiving to make comparisons because the weight of each administrative structure is qualitatively different in each institutional framework.

b) The existent three-level classification did not always reflect the real administrative division of the country. Generally, the administrative division of each country is based on only two of the three administrative regions, while the third region is created for statistical proposes and to achieve some homogeneity in the classification.[42] For example, since France has functional administrative units at levels 2 and 3, the additional level is introduced at NUTS level 1. This is also the case for Italy, Greece and Spain. In contrast, the additional "non-administrative" level is at NUTS level 2 for Germany and the United Kingdom and at NUTS level 3 for Belgium.[43] [44]

[42] "[…] a no administrative structure has an average size similar to the Community average; in this case an ad hoc breakdown, called "non-administrative units", is compiled by grouping together existing smaller administrative units. Because there are no historical constraints on the regional breakdown, in this case Eurostat pays much stricter attention to compliance by all regions with the population thresholds set in the NUTS Regulation." Eurostat (2009). European Regional and Urban Statistics Reference Guide. Methodologies and Working papers. Eurostat. Luxembourg, Office for Official Publications of the European Communities**:** 255, p.7.

[43] For the sample of Member States that were included in the analysis the countries with non-administrative divisions at level nuts-2 are: Ireland, Portugal, Finland, Sweden and United Kingdom.

[44] In 2008 some changes were made to the regions at NUTS-2. The only countries of my study affected were Germany (Sachsen-Anhalt no longer has a split into NUTS 2 regions) and United Kingdom (in Scotland, the border between North-Eastern Scotland and Highlands and Islands has been shifted).

V.7. Constructing the database

The ERS represents a good opportunity for the comparative study of crime at a regional level. To my knowledge, there has not been a similar data collection with the extensiveness and quality of the ERS. Nevertheless, the ERS needs to be used with a cautionary approach because although the general description of the data promises a wide spectrum of information, the real status of the data is different and needs to be reviewed.

The most important limitation of the ERS is the extended presence of missing values for a large number of regions and indicators. To obtain a sample of data with the fewest missing values possible, I have applied some criteria to concentrate the size and the scope of the sample in the countries with better scores of complete data, and with relevant indicators for the theory.

First, I have made a selection of indicators that, according to the theoretical base of my hypotheses, could work as viable observable measures for the latent factors. The result was a first selection of more than 200 indicators on demographic statistics, economic accounts, education, labour market, employment, unemployment, socio-demographic labour force, labour market disparities, migration, structural business and health.

During the first screenings of the data, it became evident that the missing cases were mainly clustered in the most recent Member States, and in the older entries. There was also a disparity in the years in which the first entries were collected. For example, all the economic data from the European System of Accounts (ESA95) (EU 2010) started in 1999 while the health statistics are available from 1994. In view of the missing values' distribution, a second selection was made between the Member States with the highest rate of complete entries. From the initial 27 Member States, I have reduced the sample to the 15 Member States of the EU's fourth expansion. After this selection, I conducted more diagnostics of the distribution of missing cases and, although their number reduced, there were still cases and variables with more than 30 percent missing values.

For the next selection of data, I kept the years with the most complete entries. As a result, I initially chose the data from 1999 to 2006. The missing values decreased, but their total number was still too high for a reliable multivariate statistical analysis. Looking at the distribution of missing values, it became evident that a great percentage was concentrated in two years (1999 and 2000) and in some specific regions. Based on this, I made a third and last selection and the final sample was reduced to thirteen countries for the period 2001-2006.

After cleaning the data, the indicators from the original list still had a considerable number of incomplete data. I finally deleted the indicators with more than 20 percent of total

missing values. The final number of indicators was reduced to 58, which ultimately constructed the independent variables plus the dependent variable.

To reduce the missing values to a minimum, I completed the missing entries with data from other sources. Of particular priority was the dependent variable which still had various regions with missing cases. The following table illustrates the sources, the data, and the regions (countries) that were completed without Eurostat data. The most accessible and reliable options for some regions were the regional database of the Organisation for Economic Co-operation and Development (OECD) and some national government agencies.

Table 4: no-ESR Data

Alternative Sources			
	Regions/years	ICD-10 Def.	Police Data
OECD	AT21/01-06 IT (all)/05		*
Home Office	UK(all)/02-06		*
Belgian Federal Police	BE (all)		*
Austria National Statistics	AT06/01-06	*	
French National Institute for Statistics and Economic Studies	FR (all)/06	*	

The regional database of the OECD has a regionalization criteria compatible with the regions used in the Eurostat. The OECD uses two Territorial Levels (TL) where the TL2 is the equivalent to the NUTS-2 of the Eurostat. The database provides the number of murders reported by the police per 100,000 inhabitants. The most common definition of murder is "the unlawful killing of a human being with malice aforethought, more explicitly intentional."(OECD 2009)

Belgium was one of the countries with the least entries on the dependent variable but almost complete data on the other indicators. To keep Belgium in the analysis, I searched for data in official sources. The most disaggregated data available was from the Belgian Federal Police. The recollected data was on the number of reported deaths by *meurtre* and *assassinat*.[45]

The other similar case was the United Kingdom where I had to resort to the Home Office data on recorded homicides by region and police force for the years 2002 to 2006. The definition of homicide used by the Home Office includes deaths caused by murder,

[45] According with the online version of the Belgian penal code, *meurtre* included: intentional homicide, poisoning, infanticide, parricide, arson, voluntary explosion, robbery and extortion. For the case of *assassinat* includes premeditated poisoning, infanticide, parricide and arson.
http://www.juridat.be/cgi_loi/loi_F.pl?cn=1867060801

manslaughter and infanticide. The data only included absolute numbers of recorded homicides; the final rates were calculated by me with population data from Eurostat.

Finally, the sample included 13 Member States for a total of 193 regions from 2001 to 2006. Only 9 nations kept their complete number of regions. For the cases of France, United Kingdom, Finland and Germany, some regions with a higher percentage of missing values were deleted from the database (view appendix for deleted regions).

V.8. Describing the data

Basically, the final sample has a high percentage of variables with complete information,[46] and contains indicators on the following aspects: urban composition, income, wealth, tax income, public social benefits, various indicators of employment, and educational attainment.

To identify the presence of multivariate outliers, I conducted a Hadi test[47](see appendix table for the list of regions for every year). The presence of multivariate outliers is a good sign of a non-normal distribution, however, I have also conducted the Jarque-Bera tests for skewness and kurtosis for each variable. The results have shown that almost one half of the indicators of the independent variables are non-normally distributed with variant scores of skewness and kurtosis. The other half of the indicators were at least moderately skewed (particularly the indicators of income and taxes).

The distribution of the dependent variable has high skewness and kurtosis scores in all the years. This is a common characteristic of crime data (particularly homicide data) for two reasons: homicide is a very improbable event with a low frequency, and the distribution of high rates of homicide tends to be concentrated in a reduced number of cases who attract the whole variance of the variable. To improve the distribution of the data, I used a natural log transformation for all the remaining variables.[48]

[46] There were only two exceptions: the independent variable households in densely populated areas (HURB1) with a missing value around 10 and 13 percent, and the dependent variable for Italy in 2004 with 10 percent.
[47] The Hadi test consists in the usage of a measure of distance from an observation to a cluster of points. A base cluster of r points is selected and then the cluster is continually redefined by taking the r+1 points closest as a new cluster. The procedure continues until some stopping rule is encountered.
[48] I used the transformation ln(x+100) because there were some variables with zeros as values.

These are some general characteristics of the distribution of the principal indicators:

a) The most densely populated regions are Inner London, Brussels, Melilla, Vienna and Berlin, while the less populated regions are in Finland and Sweden.

b) Taking into account the GDP per inhabitant (compared with the EU average) for 2001 to 2006, the regions with stronger and steadier economic growth are in Greece, Spain, Ireland and United Kingdom. Conversely, Italy and Portugal had the lowest growth rates, followed by several regions in Belgium, Germany, France and Austria.

c) The indicators of income and wealth have shown the existence of both intra-national and international disparities in the Member States. The within-nations differences in the GDP per inhabitant are bigger in the United Kingdom and France while the smaller differences are in Ireland.[49] Other interesting internal differences can be seen through the regional dispersion of the GDP (Eurostat 2009). For the reference period, the distance between richest and poorest regions decreased in a limited number of regions from Spain, Finland, France and Italy.

d) The distribution of regional income (measured with household disposable income per inhabitant) is highly concentrated in five regions of the United Kingdom, four in Germany and one in France. The countries with the poorest regions are Italy, Portugal, and Greece. The regions where the differences were reduced are in Ireland, the Netherlands, and Sweden. A particular characteristic of the group of countries studied is the long-term tendency towards narrowing the spread in regional income values in the base period (Eurostat 2009).

e) Because of the redistributive nature of taxation systems in Europe, the indicators measuring the amount of levied taxes and public monetary benefits have a dissimilar distribution. For example, a great percentage of taxes come from wealthy regions, while the redistribution of taxes in the form of public money is highly concentrated in regions with lower income.

[49] Nonetheless, it is important to consider that the GDP data can be deceiving when used alone as a measure of regional wealth. The GDP data tends to be highly concentrated in big cities particularly capital cities. The cut back is that those regions also had an important number of commuters that work in the regions with high GDP per-inhabitant but live in regions with a more modest economic performance.

f) The employment situation has a distribution of higher rates in Germany, Austria, United Kingdom and the Netherlands. On the other extreme, the regions of southern Spain, France, Italy, Greece, two Belgian regions (Bruxelles-Capitale and Hainaut), and the overseas regions of France had the lowest employment rates. Nonetheless, in the long-term, there is a clear tendency for these regions to reduce the regional and national disparities in employment rates. Finally, the higher rates of unemployment are to be found in eastern Germany, the French overseas departments, the region of Extremadura in Spain and the southern regions of Italy.

V.9. The regional death rate

The dependent variable has a mean of 0.93 for the reference period. 2003 was the year with the lower mean (0.85) while in 2004, the highest score was achieved with a mean value of 1.06. For my group of 193 regions, 75 percent have a death rate value ranging under 1.1 to 1.3. The four regions with the lowest death rate mean in the six years are: Prov. Brabant Wallon (0.2) in Belgium; the Gloucestershire, Wiltshire and Bristol/Bath and the Herefordshire, Worcestershire and Warwick region (0.3) in United Kingdom; and The Border, Midland and Western region (0.3) of Ireland.

The distribution of death rates reflects the typical distribution of these kinds of variables. Because death by homicide and assault is an inherently improbable phenomenon, their distribution tends to be accumulated in the lower scores. In my sample, the distribution is positively skewed and with high kurtosis levels (particularly the year 2001), which means that the vast majority of cases is distributed around the lower death rates.

Other interesting characteristic is the concentration of higher values in a compact group of regions. Calculating the Interquartile Ranges of the dependent variable, the following regions qualified as severe outliers for different years: Corsica (France), Ceuta, Melilla (Spain), Pohjois-Suomi, Itä-Suomi (Finland), Algarve, Madeira (Portugal), and Calabria, (Italy).[50] Of particular interest are the cases of Corsica in 2001 with an extraordinary rate of 9.9 and Ceuta in 2005 with a rate of 6.0. For the case of Finland, the two regions have also a lower population density: Itä-Suomi had the fourth lowest (9.5) and Pohjois-Suomi the sixth place (22.9).

Alone, these eight regions had a mean of 3.01 from 2001 to 2006 while the entire sample's mean without outliers is 0.83 for the same years. In comparison with the sample

[50] The test also detected the region of Madrid (4.0) in 2004 and Inner London (3.1) in 2006, however these rates are counting the terrorist attacks of 2004 and 2006 and do not reflect the "normal" rate of those cities.

average, these eight cases are more densely populated and have a lower GDP and income level than the sample, but they are not close to the mean of the poorer regions. Their employment and unemployment rates are very close to the ones of the sample. Concerning educational level, there is a relatively large difference between the sample and the outliers but they are still distant from the regions with the lowest scores. Finally, the level of levied taxes and received public monetary benefits are smaller in comparison with the sample, but not close to the regions with lower indicators (more descriptive data in appendix).

The descriptive statistics of the group of eight outliers have an interesting characteristic namely, they do not comply with the expected or common characteristics of these types of outliers. It has been largely mentioned in the empirical literature that units with unexpected rates of violent crime, are also low performers on economic development and education to name a few. However, in this case the eight regions have lower scores than the rest of the sample, but their socio-economic indicators are not those of the regions with the worst socio-economic conditions. Considering these reasons, I have decided to leave the eight regions with particular high rate of death rate in the sample, because their high scores are not related with extreme values on the dependent variables.

V.10. Factor Analysis and Structural Equation Modelling

For the analysis of the proposed model, I have applied Structural Equation Modelling (SEM) techniques to test its empirical viability in a sample of European regions. The first part of the analysis determines the factors for the components of social strain. Having found the corresponding factors, I have used SEM[51] to test the identified structural relations between the components. I first ran a confirmative application of SEM to the original model of social strain, and then performed an explorative usage of SEM modelling to find alternative structures for the regions under study. For both the factor analysis and structural equation modelling, I used the full information maximum likelihood estimation method to deal with the still present missing values in the sample.

V.11. Confirmatory Factor Analysis

The first part of the empirical study is based on the application of Confirmative Factor Analysis (CFA) to find the best group of indicators for each component of social strain in all the regions from 2001 to 2006. From all the available variables in the final sample, the construction of the factors was first conducted by a pre-selection of the indicators according

[51] I used the program Amos v.17 for the factor analysis and the structural equation modelling

to their theoretical relevance or closeness to the components of social strain. This first classification was the starting point for the CFA. The general procedure was first to find a good fitting model for the year 2006 and if the model worked, to then test it on the remaining years. The final factors are the ones that showed good measures of fit for all the years. In other words, all the factors are empirically valid for the period 2001-2006. These are the results of the CFA and the best factors whose structure gave a better representation of the concepts postulated in the theory.[52] [53]

V.11.1. Factor AEC

The original formulation of AEC would have needed a second-order factor to capture the complete dimension of the concept. However, second-order factors need three first-order factors with at least four indicators. With the available data, it was impossible to find the required number of indicators, so I have stayed with a simpler first-order factor for the AEC.

The final configuration of AEC included two factors: the Stratification Factor is represented by Urbanism (URB), and the Economic Factor by Economic Wealth (EW). According to the indicators qualified for the factor URB, the element of social stratification is the degree of urbanization, where highly urbanized regions are depicted through high levels of population density and of households in urbanized areas. The other factor is capturing the variation of two measures of regional economic wealth. The resulting AEC factor measures the regions ranging from highly urbanized and economically wealthy regions, to low urbanized regions with a lower economic performance.

Table 5: Factor AEC.

Standardized Regression Weights								
			2006	2005	2004	2003	2002	2001
DEN	<---	urb	0.761	0.762	0.76	0.761	0.761	0.76
HURB1	<---	urb	0.709	0.699	0.701	0.706	0.71	0.712
GDP	<---	ew	0.879	0.881	0.882	0.881	0.885	0.889
INCD	<---	ew	0.809	0.812	0.824	0.801	0.794	0.809
all sig	P<.001							

Correlations								
			2006	2005	2004	2003	2002	2001
ew	<-->	urb	0.644	0.657	0.653	0.652	0.643	0.638
all sig	P<.001							

[52] The tables with the factor loadings are in the appendix

[53] To achieve a better goodness of fit, I have equalled some parameters according with an analysis of the critical ratios for differences between parameters

Model Fit Summary					
X^2	df	P	RMSEA	CFI	ECVI
27.631	28	0.484	0	1	0.121

V.11.2. Factor LABC and EDU

For the component OS, the ideal constitution of factors would have also been of the second order, however, again data insufficiency made it impossible. Nevertheless, I have managed to identify a structure with two factors for the OS component: Labour Conditions and Education. The factor Labour Conditions (LABC) was finally constructed with three measures of employment rate by age and one indicator of unemployment. The second factor, Education (EDU) had two indicators: achieved educational level and long-life learning. For the two factors of the OS component, no connection or link (correlation) could be identified. As a result, the presumed theoretical connection between the factors of the component Opportunities Structure does not have empirical support with the data. The OS component is represented with two non-correlated factors.

This empirical depiction of the component OS is based on the idea that regions with a good opportunities structure should have high scores of employment and lower levels of unemployment, as well as high levels of educational attainment in the three educational sectors and for long-life learning.

Table 6: Factor LABC.

Standardized Regression Weights								
			2006	2005	2004	2003	2002	2001
EMPRD	<---	labc	0.814	0.811	0.819	0.836	0.84	0.844
EMPRB	<---	labc	0.852	0.859	0.852	0.873	0.887	0.895
EMPRA	<---	labc	0.708	0.74	0.73	0.756	0.777	0.778
UEMPC	<---	labc	-0.736	-0.749	-0.8	-0.788	-0.801	-0.794
all sig	P<.001							

Model Fit Summary					
X^2	df	p	RMSEA	CFI	ECVI
70	23	0	0.42	0.981	0.167

Table 7: Factor EDU.

Standardized Regression Weights								
			2006	2005	2004	2003	2002	2001
POPEC	<---	edu	0.919	0.919	0.916	0.914	0.911	0.911
POPEB	<---	edu	0.942	0.942	0.941	0.941	0.941	0.941
POPEA	<---	edu	0.789	0.788	0.766	0.756	0.751	0.752
LLL	<---	edu	0.786	0.761	0.829	0.708	0.58	0.544
all sig	P<.001							

Correlations								
			2006	2005	2004	2003	2002	2001
e8	<-->	e9	-0.181	-0.181	-0,341*	-0,314*	-0.219	-0.127
e6	<-->	e9	0,618*	0,609*	0,308*	0,466*	0,483*	0,538*
*sig	P<.001							

Model Fit Summary					
X^2	df	p	RMSEA	CFI	ECVI
20.33	11	0.983	0.027	0.997	0.144

V.11.3. Factor INST

For the component Institutional Support, there was only sufficient data to create a single factor (INST) with three indicators. These measures represent the presence of institutional support in the form of the extent of public institutions as economic regulatory agents in the studied regions. The measures included two underlying characteristics: two indicators of the amount of money paid by households to the state in the form of taxes and social contributions, and an indicator of the quantity of monetary resources returned to households from the state in the form of social benefits. This factor accurately captures the regions with high scores of institutional intervention in the form of levied taxes and monetary returns from the state.

Table 8: Factor INST.

Standardized Regression Weights								
			2006	2005	2004	2003	2002	2001
SECB	<---	Inst	0.985	0.985	0.985	0.985	0.985	0.985
SECS	<---	Inst	0.985	0.985	0.985	0.985	0.985	0.986
SECT	<---	Inst	0.952	0.959	0.96	0.957	0.959	0.956
all sig	P<.001							

Correlations								
			2006	2005	2004	2003	2002	2001
e2	<-->	e3	0.081	-0.153	-0.325	-0.39	-0.386	-0.368

Model Fit Summary					
X^2	df	p	RMSEA	CFI	ECVI
13.662	5	0.018	0.039	0.999	0.097

After the identification of the factors for the three social strain components, there is now a total of four factors to construct and test the structural model. As already mentioned, the results of the CFA are not the expected reflection of the theoretical construct. One concern is that for the components AEC and OS, it was not possible to create a second order factor. Another important shortcoming is that the four factors had a relatively small number of indicators, ranging from 2 to 5 observed variables. According to the statistical literature, the latent variables in CFA and SEM modelling should have the most indicators possible to assure an increased variance for the latent variables. Unfortunately in this case, the final factors have a small number of indicators. Nevertheless, with this limitation, the resulting factors showed very acceptable goodness of fit scores and they can be considered as reliable and suitable factors to test the structural model. Also problematic is that in the original formulation of social strain, the factors of the component OS do not have the expected correlation. Finally, taking into account a two-step approach to model identification, I made a CFA with the five factors to assess probable identification problems of the measurement model. The CFA is identified with 571 degrees of freedom.[54]

V.12. SEM confirmative[55]

The second step of the study is the testing of the complete model of social strain. To do this, I have implemented Structural Equation Modelling (SEM) techniques in order to find the presence of social strain in the regions under study. I have used the resulting factors as the measurement models of the complete model. I tried to test the complete structural model of social strain, however, the model as stipulated by the theory had several problems when it was transferred to structural equations, and it could not be minimized because of identification problems.

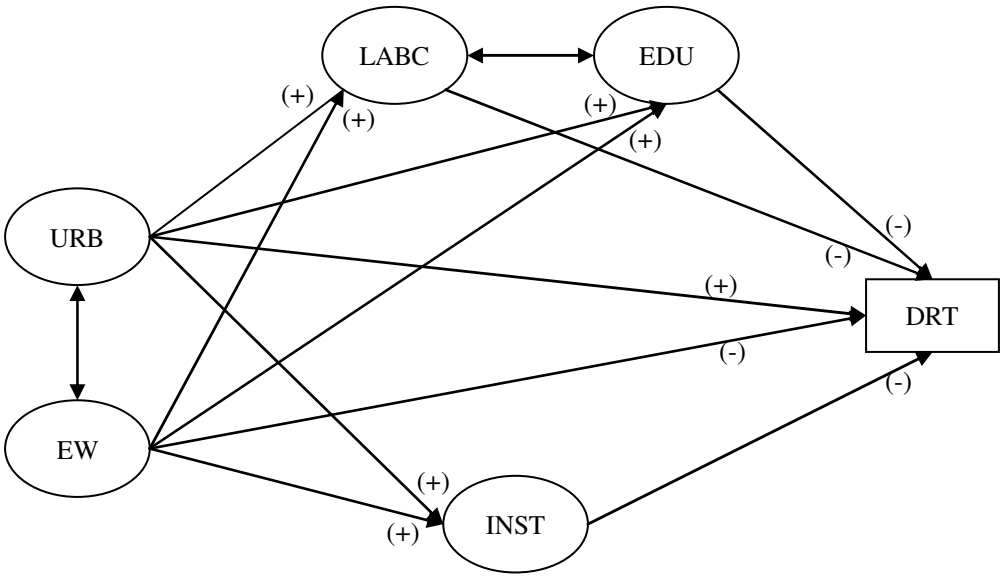
Other problems in the minimization of the original model came from a negative variance for the residuals of the factor EDU. Negative error variance is a problem for various reasons, but in general can be assumed as a fit problem. One reason for serious fit problems is an underlying correlation in the data that had not been adequately incorporated in the model. In this case, I tested for the existence of significant correlations between the factors. One interesting result is the presence of a quite strong correlation between the factors EDU and INST, and lower but still significant correlations between EDU and the URB and EW factors. These correlations, and particularly the EDU-INST, could be the reason behind the negative variances, and a sign of the existence of a different structure in the articulation of the

[54] DF=sample moments- parameters (810-239=571)
[55] The complete diagrams of the models are in the appendix

components. For this first structural model with the confirmative approach, I could try different strategies to cope with this negative variance. However, I would still be faced with the problematic correlation in further sections as an argument for an explorative approach to identify different structures of social strain.

To deal with the problems of the original model, I started to work with the model by progressively introducing the paths of the structural model. The objective was the step by step incorporation of regression weights in order to maintain identification. The objective was to get as close as possible to the original model, with a structural model that could be adjusted to the data. With this strategy, the first adjusted model without errors in the procedure was the following:

Figure 4. Model #1.



The results produced by this first model of social strain were not as expected. The principal problem is the unstable significance of the paths across the six years.[56] Concerning the relations between the independent variables all the paths were significant for the six years, while the paths to the dependent variable were very irregular. The stronger relationship found was the effect of the latent factor EDU on DRT, followed by the effect of INST and SF. However, the first one was significant in five years only while the other two relationships were significant in three years only. There are also problems with the signs in various paths,

[56] It was not possible to include the correlations between the factors URB-EW because of errors in the minimization process.

of particular concern is the change of the path URB-LABC from positive to negative. At the same time, the fit values of the whole model for the complete period were not satisfactory.

Table 9: Model #1.

Model #1													
			2006		2005		2004		2003		2002		2001	
			r	p	r	p	r	p	r	p	r	p	r	p
labc	<---	urb	-0.36	***	-0.338	***	-0.337	***	-0.345	***	-0.288	***	-0.28	***
labc	<---	ew	0.686	***	0.677	***	0.677	***	0.681	***	0.679	***	0.68	***
edu	<---	ew	0.432	***	0.44	***	0.465	***	0.442	***	0.437	***	0.441	***
Inst	<---	urb	0.707	***	0.73	***	0.744	***	0.738	***	0.746	***	0.745	***
DRT	<---	urb	0.547	***	0.962	***	0.81	***	0.037	0.734	-0.294	0.033	0.065	0.649
DRT	<---	ew	-0.29	0.004	-0.319	0.005	-0.305	0.015	0.003	0.974	0.121	0.275	0.142	0.226
DRT	<---	labc	0.076	0.461	0.065	0.57	0.229	0.07	-0.21	0.021	-0.287	0.007	-0.381	***
DRT	<---	edu	-0.412	***	-0.273	***	-0.34	***	0.489	***	0.376	***	0.244	0.002
DRT	<---	Inst	0.08	0.37	-0.549	***	-0.328	0.015	-0.701	***	-0.299	0.008	-0.536	***
	P<.001													

Model Fit Summary					
X^2	df	p	RMSEA	CFI	ECVI
10366.205	625	0	0.116	0.594	9.497

Taking this model as a starting point, I have made some *ad hoc* procedures in order improve it. The result was a trimmed model where the factors LABC and INST did not hold any strong relationship with the dependent variable and were taken out of the model. The remaining model has two exogenous latent variables and one endogenous variable. And together with the irregular significance of the regression paths and the marginal improvement in goodness of fit, the resulting model has nothing to do with the original formulation of social strain.

Table 10: Model #2.

Model #2													
			2006		2005		2004		2003		2002		2001	
			r	p	r	p	r	p	r	p	r	p	r	p
edu	<---	ew	0.424	***	0.44	***	0.462	***	0.439	***	0.437	***	0.444	***
DRT	<---	urb	0.471	***	0.613	***	0.477	***	0.22	0.006	-0.053	0.537	0.177	0.036
DRT	<---	ew	-0.261	***	-0.289	***	-0.168	0.034	-0.319	***	-0.192	0.032	-0.222	0.01
DRT	<---	edu	-0.197	0.006	-0.372	***	-0.33	***	-0.198	0.011	-0.012	0.884	-0.175	0.038
	P<.001													

Model Fit Summary					
X^2	df	p	RMSEA	CFI	ECVI
3110.949	171	0	0.122	0.633	2.966

Despite the progressive incorporation of paths and the *ad hoc* procedures, the failure of the model is reason enough to consider the creation of an alternative configuration. I have mentioned that the most probable reason behind the negative variance is the existence of a strong correlation between the factors EDU and INST. This correlation can be interpreted as a direct consequence of the way in which the European educational systems is structured. There are two points to consider. First, in terms of the ideas of the Institutional-Anomie Theory, it could be possible that both the educational and the institutional structures are closer than in other countries,[57] and consequentially are a more decisive factor on the availability of opportunities than the employment dimension. Second, because of the size of the units of analysis, it could also be possible that the link between education and institutional support is stronger at the meso-level because of the prevalence of decentralized structures in most of the countries represented in the data. A third probable reason points to the nature of the indicators of the latent factor INST. The measures used for this variable are general measures of the amount of taxes levied by the state and the state financial support. In this case, it would not be strange to find that in the regions where the levying of taxes is high, the local educational level is consequentially elevated.

In view of these results, I have decided to leave the confirmatory approach and go further with an explorative analysis of social strain with some alternative configurations. My objective is to find, perhaps with other combinations between the latent factors, a stable model that could give empirical support to social strain.

V.13. SEM explorative

As a starting point for the explorative application of SEM, I have taken into consideration the problems of the original model. From the start, there are two problematic correlations: a light link between EW and EDU, and a stronger one between EDU and INST. To see if these correlations correspond to an empirical structure in the regions, I tried two new factors.

The first factor was a reformulation of the exogenous variable of social strain. I incorporated the factor INST to the factors URB and EW, as three latent variables with the corresponding correlations. The factor INST-URB-EW did not work and could not be minimized. In a second attempt, I created the factor EUD-INST to capture the correlation between the two latent variables. The new latent factor was stable and significant in the six years.

[57] Apparently for the case of Europe it is not possible to find an opportunity structure like in the USA where education and labour opportunities are conceptually closer.

Table 11: Factor INST-EDU.

Standardized Regression Weights								
			2006	2005	2004	2003	2002	2001
POPEC	<---	edu	0.927	0.927	0.925	0.923	0.92	0.921
POPEB	<---	edu	0.95	0.95	0.949	0.949	0.949	0.949
POPEA	<---	edu	0.749	0.752	0.73	0.721	0.715	0.717
LLL	<---	edu	0.817	0.79	0.832	0.743	0.65	0.632
SECS	<---	Inst	0.986	0.986	0.986	0.986	0.986	0.986
SECT	<---	Inst	0.949	0.949	0.946	0.941	0.943	0.941
SECB	<---	Inst	0.986	0.986	0.986	0.986	0.986	0.986
all sig	P<.001							

Correlations								
			2006	2005	2004	2003	2002	2001
Inst	<-->	edu	0.991	0.991	0.993	0.999	0.994	0.987
e1	<-->	e4	0.544	0.523	0.272	0.385	0.351	0.392
e4	<-->	e7	0.501	0.551	0.525	0.498	0.515	0.527
e1	<-->	e5	-0.486	-0.412	-0.486	-0.472	-0.462	-0.459
all sig	P<.001							

Model Fit Summary					
X^2	df	p	RMSEA	CFI	ECVI
530.927	82	0	0.069	0.966	0.683

I have incorporated this new factor in a CFA with all the latent variables to see if the measurement model can be identified. The measurement model is identified with 565 degrees of freedom.

With these latent variables, I propose an alternative model of social strain with one exogenous independent variable (URB-EW) and two endogenous independent variables or mediators (LABC and EDU-INST). It was not possible to maintain the correlation linking the latent variables EDU and INST because of its function as an endogenous variable. However, I expect that the existent correlation can be assessed through the three covariances of the residuals. The following diagram shows the resulting structural model followed by its corresponding tables.

Figure 5: Model#3.

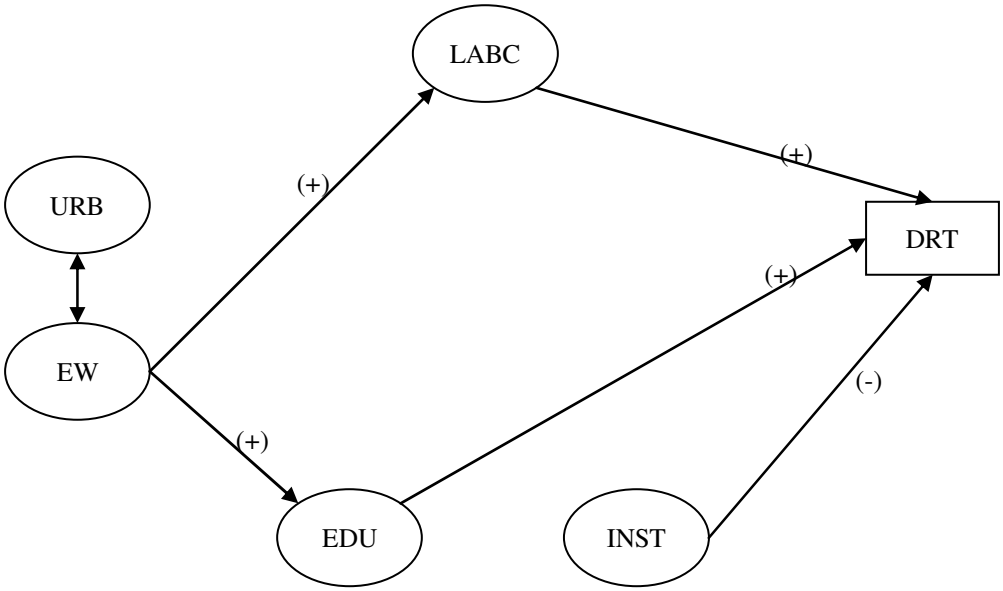


Table 12: Model#3.

Model#3													
			2006		2005		2004		2003		2002		2001	
			r	p	r	p	r	p	r	p	r	p	r	p
labc	<---	ew	0.507	***	0.501	***	0.51	***	0.505	*	0.534	***	0.538	***
edu	<---	ew	0.442	***	0.464	***	0.465	***	0.455	*	0.455	***	0.464	***
DRT	<---	labc	-0.212	0.006	-0.152	0.013	0.014	0.823	-0.181	*	-0.199	0.005	-0.284	***
DRT	<---	Inst	0.125	0.069	-0.554	***	-0.524	***	-0.652	*	-0.36	***	-0.408	***
DRT	<---	edu	-0.16	0.029	0.362	***	0.385	***	0.483	*	0.249	***	0.233	***

P<.001

Model Fit Summary					
X^2	df	p	RMSEA	CFI	ECVI
10271.749	631	0	0.115	0.598	9.404

Table 13: Models Comparison.

Model Fit Summary						
	X^2	df	p	RMSEA	CFI	ECVI
M#1	10366.205	625	0	0.116	0.594	9.497
M#2	3110.949	171	0	0.122	0.633	2.966
M#3	10271.749	631	0	0.115	0.598	9.404

As showed in the model and in the corresponding tables, there are not direct links connecting the exogenous variable to the dependent variable. According to the model, all the probable effects of the latent factors representing the AEC go through the endogenous factors. The paths between exogenous variables and endogenous variables were significant for the six years and have a positive sign.

Concerning the endogenous variables and the dependent variable, the factor LABC has a small negative effect on death rates and is only significant for 2001 and 2003.[58] For the factor INST, there are relatively strong significant negative effects on five years, 2001-2005. In the case of EDU, there are modest positive and significant effects for the same years. Finally, the goodness of fit scores represent a very marginal improvement in comparison with the original model of social strain.

Discussion

The first interesting result is related with the factors identified in the CFA or the measurement model. The identification of five stable factors representing the core components of social strain is a good indicator of the existence of such concepts as empirical structures in the regions under study.

Although the original formulation of social strain did not work with SEM modelling, two important ideas can be derived from the study. First, the fact that the original configuration of social strain did not find support in the studied regions is an indicator for the existence of differential institutional and structural arrangements related with the appearance of criminological contexts. Second, the modest but still significant results of the last model throw light on the presence of those different structures. Especially relevant is the reformulation of the factors for the component Institutional Support through the incorporation of EDU.

Together with the concept of social strain, another important objective of the study was the finding of mediators regulating the effects of the exogenous independent variables. Looking at the two complete models (1 and 3), the direct effects of the factors from the component AEC were not supported in almost any regression path of the structural parts of the models. On the contrary, in the two models there were several significant regression paths from the mediators through the dependent variable. For the case of the last model (M#3), the direct effects where not at all present in the final configuration, while the stronger effects on the dependent variable came from one mediator: the factor EDU-INST. A different case is the

[58] There is also a change of sign of the effects in 2004 but it is very small and not significant

component OS and its latent factor LABC. In the two models and even after ad hoc procedures, LABC as mediator has not had an effect on the dependent variable.

Finally, the most important finding of the application of CFA and SEM modelling to the studied regions is contained in the last model. The fact that the paths coming from the AEC factors are mediated through Institutional Support and have some influence on the variance of death rates is an appealing evidence for the role of institutional frameworks on the formation of criminogenic contexts.

This study has a particular weakness in relation with the data that needs to be taken into account. The utilization of data from other sources carries with it the problem of different definitions of the dependent variable. For a total of 1158 regions, the data for 421 regions came from other sources different than the Eurostat. Of particular interest are 385 regions in which the definition of homicide is not based on the ICD-10. The data used for these regions is based on murders reported by the police (see table in appendix). The police data utilized did not include assault but only murder, and it may under-represent the real variation of violent crime in those areas.

One important problem of my empirical research is the absence of stronger scores for the goodness of fit measures in all the tested models. One probable reason behind it could be a poorly specified model without equivalence on the data. However, before the pertinence of the theoretical model is rejected, there are also some important limitations related with the data that need to be appraised. The final size of the sample, although within the limits, is still far from the ideal size that a sample must have for a completely satisfactory use of the SEM models. At the same time, the absence of more indicators of violent crime also represents a considerable reduction of the explicable variance of the dependent variable. Finally, the impossibility of gathering more indicators for the latent variables could also have hindered the results of the model.

In comparison with other studies of violent crime in Western Europe, the present work is to my knowledge the first to incorporate a cross-national and longitudinal analysis of homicide rates to find an answer to particular theoretical questions at the meso-level. It is also the first attempt to use the Eurostat regional database (with disaggregation level NUTS-2) as its empirical source.[59]

[59] A previous cross-national study of city-level homicide rates had been made by McCall, P. L. and P. Nieuwbeerta (2007). "Structural Covariates of Homicide Rates: A European City Cross-National Comparative Analysis." Homicide Studies **11**(3): 167-188. using the Urban Audit database of Eurostat

This work is also the first attempt to find support for two appealing ideas: the existence of different contextual configurations related with criminogenic contexts; and the relevance of the institutional framework as a way of containing the pervasive effects of social stratification and economic hardship. The latter finding in particular has captured the attention of scholars in Europe (Aebi 2004) and in the rest of the Western world (LaFree 1999; Pratt and Cullen 2005).

A particularly appealing result not previously found in the literature is related to the contra-intuitive effect found in the last model for the factor EDU-INST. According to the theory, EDU as a factor of the component OS has a negative influence on the variation of death rates, where better scores of educational attainment are related with smaller death rates. On the contrary, for the factor EDU-INST the direction of the relation has changed. The change of the sign implies higher death rates when the conditions of institutional support are lower and educational attainment is higher.

This effort to make an empirical evaluation of social strain with available regional socio-economic data from Western Europe has signalized interesting ways that need to be further developed both theoretically and empirically.

Concerning the empirical work, the original formulation of social strain needs more specific data to adequately include the particularities behind each concept. An example is the contrast between the original theoretical formulation of Ascribed Economic Conditions and the factors (URB and EW) used in the models. As a concept largely based on the work of Blau and Blau, the AEC tries to illustrate the conjunction between economic inequality (as lack of economic resources) and the position in the social structure (system of stratification). In the original formulation of Blau and Blau, the concept was connected to the membership to ethnically differentiated groups in the United States. The application of this concept in Europe requires a different operationalization to give account of the particular historical patterns of the European context. However, there are not sufficient data to make cross-national and longitudinal comparisons. For this reason, the indicators used to measure the latent variables of the AEC need to be improved in further works.

With reference to the theory, the resulting effects of Institutional Support as a mediator point to an already present issue in the literature. Many studies affirm the negative effects of welfare structures and their provisions on the variation of crime rates (Albrecht 2001; Oberwittler 2007; Savage, Bennett et al. 2008). There is also interesting evidence on

differentiated effects of welfare on different types of crime (Chamlin, Cochran et al. 2002), as well as recent theory that has incorporated these ideas into a more systematized conceptual framework (Chamlin and Cochran 2007; Messner and rosenfeld 2009).

The results also have connections with a well-presented argument by Killias about the limits of the USA-based theories, and the different conditions in which crimiogenic context can appear (Killias and Aebi 2000). In the last model, the observed variation of the components and their articulation could be generated by a particular institutional structure of the 13 European nations under study. For example, the high correlation between the factors INST and EDU (and the resulting factor) can be observed as a probable indicator of a differential institutional arrangement in some European regions. For some societies, education is closer to and more dependent on the institutional framework than on the opportunities structure. This may be possible because the concepts of AEC and Institutional Support strongly rely on the development of historical patterns.[60] These differential trajectories could be the reason behind the last model. However, this possibility should be further tested with better data and in other contexts.

Finally, the general focus of this study could be of interest for other theories and research questions, particularly regarding the heuristic possibilities of cross-national and longitudinal studies at the meso-level. If the findings of this work can be supported with different data, then it would be appealing for future research to go further on the exploration of theories and methods based on the existence of mechanisms, structures or relations particular of the meso-level. These studies could be good opportunities to confront different theories, resolve theoretical or empirical problems, find an increased differentiation according to contexts, and improve the dialog between theory and empirical work.

[60] For example: the historical patterns of ethnical discrimination and inequality; the boundaries of the political institutions; and the connections between market and polity.

Conclusions

This work has followed three main objectives: to reassess the comparative studies of crime; to elaborate a proper concept for the analysis of violent crime; and to study violent crime rates in a group of European countries. To fulfil these aims, the research has been divided in three general sections. The first part consists of one chapter devoted to critically review the small amount of comparative research on violent crime that exists nowadays. Its concluding remarks pointed out the long-standing need of an improved communication between theory and empirical work, as well as the pertinence of a meso-level explanation of crime. The second section contained three central chapters in which the theoretical structure of the concept of social strain is reviewed and established. Finally, the third part used the concepts and hypotheses proposed in the former chapters as instruments for an empirical evaluation of social strain.

Concerning its methodological approach, this work contributes to the debate around the meso-level of observation as a valid methodological position to study social phenomena like violent crime. The application of this approach to violent crime has been based on three ideas: 1) the specification of a meso-level as a convenient category for comparative research; 2) the variables and their relations are expected to be different at the meso-level; 3) the empirical expression of these differentials are social mechanisms connected with modifications on our variables of interest.

Based on these points, every chapter of this work contains a discussion related to the meso-level of analysis, which is connected to the central thread of the chapter in question. In the introductory chapter about the comparative study of violent crime, I discussed the possible methodological advantages of a meso-level based approach in order to enlighten the differences within middle-sized units of analysis. In the chapters dedicated to the critical review of the relation economy-crime and the anomie-strain approach, I identified the common lack of a precise definition of the meso-level. This was done as a double-oriented strategy that sought to avoid the unexpected mixture of levels, and to identify theoretical relevant relations that are only present at the meso-level of analysis. Following the same argumentation, the chapter that dealt with the anomie-strain tradition also tried to illustrate the relevance of the middle-range theories of Merton and the IAT, as productive conceptual instruments to depict the social sources of strain at sub-national levels. Furthermore, the fourth section tried to bring together all the lines of argumentation that were drawn in the former chapters, so as to build the concept of social strain as a first attempt to integrate

diverse, but nevertheless closely related, concepts into a meso-level explanation of violent crime rates.

Accordingly, Social strain has been conceived as a meso-level concept, and is strongly based on the existence of social mechanisms as a methodological strategy to explain the influence(s) of contextual characteristics in the variation of violent crime. In this case, the contextual configuration called social strain is associated with the existence of social mechanisms interrelated to three components: ascribed economic conditions, opportunities structure and institutional support. According to the reviewed theories, the presence of these components is the necessary condition of social strain. However, under this schema, there is another necessary condition for the criminogenic effects of social strain namely, the form in which those components are articulated; or, to state it differently, which particular combination of the three components is criminogenic. The great advantage of this schema in a comparative study of sub-national units is the identification of combinations associated with the variance of violent crime, and therefore of the existence of social strain.

The principal findings around social strain can be summarized in three general points. Firstly, the identification of four to five factors representing the empirical structure of the components of social strain. The fact that with the available data it was possible to detect significant factors supported with acceptable scores of goodness of fit, is a first important achievement towards the identification of theory-based contextual characteristics in the studied European regions. Another relevant finding related to the factorial analysis is the identification of the factor EDU-INST in these particular regions.

Secondly, the results of the application of structural equation modelling techniques showed that the original configuration of social strain is not valid at least for the 193 regions analysed in this work. However, the later application of an explorative approach to test alternative configurations allowed us to find out a model of social strain with interesting theoretical implications.

Thirdly, in none of the three used models, the direct effects of economic variables were present in the final specification of the model. In all the models the paths that maintained an acceptable level of significance with the dependent variable were indirect effects. Furthermore, the factor EDU-INST was the only stable mediator of the economic variables with significant paths to the dependent variable.

In view of the results, some theoretical connotation can be derived from the factors and the structural models. Regarding the factors, the empirical identification of three components of social strain has interesting consequences for comparative research. First, it encourages the work at the sub-national level of aggregation as a meaningful research strategy. Second, it gives, to some extent, empirical support to important concepts related to the ecological explanations of crime.

For the concept of social strain and close-related theories is important to find a difference between the conceptual structure of Institutional Support and Opportunities Structure. As for the concept created by Merton, its original formulation put accent on education and employment as indicators of OS. However, the resulting factors differed substantially. For the studied regions, the two factors showed a significant structure yet without being correlated. Furthermore, for the structural models the two factors could not stay in the same component. As a result, employment remained as the only factor of OS. A similar case is the component IS that originally was only conceived as a single-factor component. Nevertheless, for the first two structural models the component IS had not significant presence. On the contrary, by constructing the component IS with the factors INST and EDU, the results of the explorative model improved, and maintained their significance as endogenous variables of social strain.

The identification of the institutional component with a factor originally thought for OS portrays modifications on institutional arrangements that need to be included in the empirical specification of the concept. The successful inclusion of education into the Institutional Support component is a consequence of the closeness of social supportive institutions to the structure of educational opportunities. In other words, for the studied regions, levels of educational attainment are more a protection from economic turnouts than a determinant of economic success. These results alone represent a successful application of our research strategy. Although the original model for social strain was not confirmed, our second objective was to discover different articulations of social strain. The applied methodology in this case represented a good strategy to detect alterations on the contextual structure of sub-national units, a fact not yet fully considered in the literature.

With reference to the structural models, the final definition of social strain was translated into a first model subjected to empirical test with the application of structural equation modelling. As stated in the corresponding chapters, the model is based on the existence of exogenous independent variables (AEC) and endogenous independent variables (OS and IS). The

original model postulates two different types of effects in the dependent variable: the direct effects of AEC and the mediation effects of OS and IS. To identify social strain, this articulation needs to be present in the units of analysis and linked to the variation of local rates of violent crime. The original formulation was not supported by the data, meaning that such a structure is not to be found as a criminogenic context for violent crime. In view of the results an alternative articulation was applied, and the results showed an interesting change on the articulation of the components. The final model, with moderate but significant connections to violent crime, showed a different articulation based on the modification of the Institutional Support component.

Pushing forward the implications of the results, it is possible to say that, in the studied regions, social strain tends to be criminogenic in densely populated urban areas with lower wealth rates. Nevertheless, to be criminogenic these socio-economic characteristics need to be accompanied by a contraction of the Opportunities Structure (lower rates of local employment), and the retreat of Institutional Support, particularly the indicators related to the factor INST. In other words, the pervasive effects of economic hardship in urban areas will be increasingly criminogenic if the chances of economic relief (through employment opportunities and institutional aid) are smaller. This conclusion represents a step forward in the description and explanation of how economic variables interact with socio-structural variables. It is particularly important for two reasons: first, economic conditions are coupled with processes of social stratification (the AEC); and second, it gives a relevant place to the characteristics of a social unit as mediators.

The identified configuration also gives, to some extent, empirical support to one important idea contained in the chapter dedicated to the anomie-strain tradition. Towards the end of the third chapter, I put forward the necessity of identifying the social sources of strain as the basis of the concept of social strain. Based on Durkheim, Merton and the Institutional-Anomie Theory, one of those sources are the Opportunities Structure and Institutional Support. Basically, these two concepts are a derivation of Durkheim's traditional ideas of regulation and integration as well as an expansion of the Mertonian concept of social distribution of opportunities. Towards the end of the chapter, my solution to the improved depiction of the social sources of strain was to differentiate between OS and IS, and to treat them as two concepts that together with the AEC represent the contextual configuration of social strain. In view of this idea, even though the results of the last model are far from being

conclusive, they are an indicator that the argumentation used in this work goes in the right direction.

The results of this study also have interesting implications for the sociological research of crime and violent crime. One of them refers to the connection between meso-level and micro-level as an alternative to the psychological fallacy. This is important because it has to do with the question of how social strain (or other contextual configuration) may become criminogenic, and in this work there are some appealing ideas that can be applied to solve this issue.

A first step is the differentiation of levels of observation in which my analysis is based. According to the present explanations of violent crime there are four levels: first, a macro-level where long-term, historical processes that modify the structural characteristics of societies are related to the decline/increase of violent crime at national level; second, a meso level where social processes and mechanisms restricted to some geographical areas (sub-national) are constantly modifying the contexts of social interactions; third, a micro level where the focus is directed to social interactions, socio-economical factors affecting them, and the place in which such events happen like: communities, counties, neighborhoods; and finally, the individual level where the analysis is centered on individual's behavior and its motivations to commit violent crime.

This differentiation is not only relevant for methodology but also for theory. These four levels or dimensions are not only a depiction of different variables, interactions and mechanisms, they are also a way of understanding the association of probabilities generating crime. The idea is that the probability that social strain becomes criminogenic is coupled with the probability associated with violent crime at the macro level. Under the same logic, the probability that social strain may become criminogenic at the meso-level is at the same time a "limit" on the emergence of criminogenic interactions at the micro-level; and micro-level processes are connected with a limited probability of crime prone behaviors at the individual level. If we apply these ideas to social strain, then it is only possible to detect a contextual configuration in sub-national units (social strain) if a particular combination of elements at the macro-level is to be found. The macro-level configuration is constraining the range of possibilities for the emergence of social strain, and in turn the existence of social strain constrains the possible social interactions at the micro-level.

We are talking about an association of probabilities, cumulative probabilities or a chain of constrains making some outcomes probable and others improbable. This could be a

step forward on the explanation of how some contextual configuration may influence the emergence of criminal behavior. The idea of a probabilistic link between the levels was already present in Merton: “As had been noted, we had found that social, spatial, and architectural configurations provided unintended and unrecognized opportunity structures affecting the probabilities of forming social ties (such as local friendships) with particular kinds of significant others leading to patterns of homophily (i.e., friendships among social similars) and under determinate conditions, patterns of heterophily (i.e., friendships among social dissimilars).” (Merton 1995:29) According to this idea, the research on violent crime, through social strain, should not stay on the identification of a contextual configuration. It should continue towards the description of micro-level interactions circumscribed by social strain like: decomposition processes of the nuclear family, deficient socialization, weaker informal control of young cohorts, etc. The work of the researcher interested in crime and violent crime should be directed to the explanation of these probabilistic associations.

Along with the implications of this work, there are some pending points that need to be improved in future projects. First of all, the concept of social strain has serious possibilities of further theoretical and empirical development. Its relatively simple structure, consisting of one exogenous and two endogenous explicative components, is proper to detect different contextual configurations. However, the definitions of each concept need to be enhanced in order to include more factors linked with the components. Altogether with theoretical improvement, it is also needed to include more quantitative and qualitative indicators. The qualitative dimension is particularly useful because some elements of social strain can not be sufficiently explained with the available quantitative data. For example, the factor education should not only comprise the relative numbers of enrolled students in different levels of education. It will be also useful to have data on the way in which a particular local/national educational system increases or limits the chances of social stability and mobility. There are educational systems with a particularly high rate of attendance that nevertheless can also have mechanisms intensifying social stratification and lowering chances of social mobility. The same idea can be extended to Institutional Support, in which it would be meaningful to include some further categories in order to reflect the differences between the probable effects of different types of institutional support.

Other issues requiring special attention are the spatiotemporal and concentration effects. For reasons of data availability, it was not possible to include a wider discussion on these topics. In the chapter on social strain, the spatiotemporal effects were mentioned as an important characteristic of the formation of criminogenic contexts. The idea is based on the introduction of a qualitative differentiation regarding how temporal and spatial factors alter the effects of explicative variables. The spatial dimension tries to consider differential effects according to the size of the unit of analysis. These effects are based on the fact that a set of independent variables (like measures of economic distress) are more criminogenic if they are localized in units of a particular size. At the same time, the idea of temporal effects tries to introduce time measures to differentiate between the long-term and the short-term presence of a variable. For instance, the probability that economic inequality will turn out to be a significant criminogenic factor may be substantially different depending on how long conditions of economic distress have been present in an area. The probability of crime rates may be dissimilar for an urban area or a community that has been under conditions of economic distress for more than ten years (long-term inequality), than for a community going through an acute period of economic crisis.

Although the spatiotemporal effects have theoretical and empirical relevance of their own, they also constitute a basic step towards the introduction of concentration as a valid category for concepts like social strain. Concentration is meant in terms of a further qualitative differentiation to grasp the relation between independent variables and spatiotemporal effects, as a category to describe and understand the distribution of social strain in the societies. If it were possible to identify different degrees of social strain in terms of concentration differentials, then it would be viable to identify and study its distribution across societies. These ideas represent an interesting line of investigation that has not been present or at least not extensively treated, in the sociological and the criminological literature.

Finally, this research has some shortcomings in relation to three issues not included in this work, but still relevant for criminology and sociology. The first one is related to the role of culture (cultural values) as a criminogenic factor. There were two reasons for excluding culture from the picture. The first one was a bet on the strength of the anomie-strain tradition without considering the cultural structure. In the corresponding chapter, I left out the role of cultural structure, and culturally transmitted values in order to take advantage of the explanatory possibilities of the other structural components of anomie and strain. This decision was based on the assumption that the cultural structure of the studied European

societies may not differ too much from the cultural values of Merton's theory and Messner and Rosenfeld's Institutional-Anomie Theory. Rather, I have decided to deal with cultural values as a constant in order to stay focused on the contextual (material) configurations. However, my assumption needs to be correctly tested to discard or accept the used approach. Furthermore, it would be interesting to make inquiries as to in which level of observation cultural values may have more relevance and how this may be connected with concepts like social strain. My first assumption is that the micro-level is the field where social strain may influence the emergence of a specific combination of cultural values, and hence of favourable definitions to criminal conducts and/or aggressive behaviour (Anderson 1999; Anderson and Bushman 2002).

Another crucial point that was not accounted for in this work is related to the position of economic conditions as exogenous independent variables. In the criminological and sociological research, it is common for economic conditions to be prioritized as the primordial source of criminogenic effects. For instance, if the associations between independent variables are viewed as a process, this process is supposed to be started by economic conditions. However, this way of portraying the succession of factors conducting to crime is more arbitrary than based on empirical evidence, at least if we consider the effects of time. If it is reasonable to state that a socially disorganized community is not always a community under economic stress, and that organized communities are not always free of economic distress, then it has to be considered that in some criminogenic processes the weight of economic conditions may change and even be under the influence of other factors like: social networks, kinship or cultural definitions. However, to find and understand when this displacement could take place, more research is needed.

Appendix

1. Indicators Definitions

Population Density
The statistic refers to the regional population at its usual residence. In accordance with this concept, the following persons are considered to be usually residents of the geographical area in question: those who have lived in their place of usual residence for a continuous period of at least 12 months before the reference date or those who arrived in their place of usual residence during the 12 months before the reference date with the intention of staying there for at least one year. The total area of the region on km^2 was used for the calculation of population density.

Sex Ratio
The proportion of males to females in the region

Number of households in densely populated areas:
Number of households in an area with at least 500 inhabitants/km2

Regional Gross Domestic Product
The estimation of the regional GDP per inhabitant is based on the European System of Accounts 1995 (ESA95) at national and regional levels. The GDP is measured in Purchasing Power Standards (PPS).[61] In order to obtain figures per inhabitant, the figures are divided by the regional average population figures for the same year.

Income
Households balance of primary income in PPS per habitant. The balance of primary income is: "[…] the deduction of the total property income payments from the total resources on the allocation of primary income account (that is, the total of primary incomes, including property incomes, received) then we arrive at the balancing item called the balance of primary incomes." (Jackson 2000) (245)

Employment rate
The data on regional employment come from the (Labour Force Survey) LFS series of the Eurostat, and I used the regional employment rate. The data represents employed persons as a percentage of the population living in private households. The employment rate is broken down by age in five groups: a = 15-24; b=25-34; c= 35-44, d= 45-54 and e= 55-64

Employment part-time
Part-time employment is defined according to the LFS were: The distinction between full-time and part-time work is based on a spontaneous response by the respondent (except in the Netherlands, Iceland and Norway were part-time is determined if the usual hours are fewer than 35 hours and full-time if the usual hours are 35 hours or more, and in Sweden where this criterion is applied to the self-employed; and is calculated per 1000 persons

[61] These are fictive 'currency' units that remove differences in purchasing power, i.e. different price levels between countries. Figures expressed in Purchasing Power Standards are derived from figures expressed in national currency by using Purchasing Power Parities (PPP) as conversion factors. These parities are obtained as a weighted average of relative price ratios in respect to a homogeneous basket of goods and services, both comparable and representative for each country. They are fixed in a way that makes the average purchasing power of one euro in the European Union equal to one PPS. The calculation of GDP in PPS is intended to allow the comparison of levels of economic activity of different sized economies irrespective of their price levels.

Unemployment
According to the LSF definition unemployed persons are persons aged 15-74 (in UK 16-74) who were without work during the reference week, were currently available for work and were either actively seeking work in the past four weeks or had already found a job to start within the next three months. I took the percentage of regional unemployment from people aged 25.

Education
The indicators used to measure educational level were LFS data on educational attainment. The indicators are population aged 15 to max by the highest level of education attained per 1000 persons. The education level is classified according to the International Standard Classification of Education (1997): pre-primary- primary and secondary (a); upper secondary and post-secondary non-tertiary education (b); tertiary education (c).

Life-long learning
The participation of adults (per 1000) aged 25-64 in education and training.

Regional social benefits
Based on the ESA95, the regional social benefits other than social benefits in kind (resources) includes social security benefits in cash, private funded social insurance benefits, unfounded employee social insurance benefits and social assistance benefits in cash received by households resident in a specific region.

Secondary distribution social contributions
Based on the ESA95 includes actual social contributions and imputed social contributions in a specific region.

Second income distribution current taxes on income
Based on the ESA95 cover all compulsory, unrequited payments in cash or in kind, levied periodically by general government and by the rest of the world on the income and wealth of institutional units, and some periodic taxes which are assessed neither on the income nor on the wealth in a specific region.

Employment hours
With LFS data is the average number of usual weekly hours of work in main job.

Rate of Deaths by homicide and assault (per 100,000 inhabitants)
Based on data on causes of death (COD) data refer to the underlying cause which - according to the World Health Organisation (WHO) - is "the disease or injury which initiated the train of morbid events leading directly to death, or the circumstances of the accident or violence which produced the fatal injury".

Causes of death are classified by the 65 causes of the "European shortlist" of causes of death. This shortlist is based on the International Statistical Classification of Diseases and Related Health Problems (ICD). COD data are derived from death certificates. The medical certification of death is an obligation in all Member States. Countries code the information provided in the medical certificate of cause of death into ICD codes according to the rules specified in the ICD. I used the cause Homicide and Assault (X85-Y09) which includes the deaths by homicide and injuries inflicted by another person with intent to injure or kill, by any means. The classification excludes injuries due to legal intervention and operations of war.

2. Missing values in the final sample

HURB1
At11, be34, es42, es43, es62, FI, IE, itc2 (06,05,04), ite2 (06,05), itf5, pt15, pt18, pt20, SE, ukk3.

DRT
The other case is eight missing values in 2001 in gr13, gr41, gr42, ie01, ukd1, uke2, uke3, and ukk2.

3. Deleted regions

FI20	CH	DK
FR91	DE41	UKM2
FR92	DE42	UKM3
FR93	DEE0	UKM5
FR94	DEB1	UKM6
NO	DEB2	
LUXEN	DEB3	

4. Death Rate descriptives and outliers

Death Rate Descriptive Statistics

	mean	max	min	sd	variance	se(mean)	sd	skewness	kurtosis
DRTY06	0.95	4.20	0.00	0.63	0.40	0.05	0.63	1.62	7.23
DRTY05	1.00	11.40	0.00	1.05	1.11	0.08	1.05	6.04	54.13
DRTY04	1.06	6.50	0.20	0.84	0.71	0.06	0.84	2.71	14.21
DRTY03	0.86	4.50	0.00	0.66	0.44	0.05	0.66	2.26	10.80
DRTY02	0.88	4.40	0.10	0.66	0.43	0.05	0.66	1.99	9.61
DRTY01	0.92	9.90	0.00	0.98	0.96	0.07	0.98	5.01	41.11

Outliers DRT

drt01		drt02		drt03		drt04		drt05		drt06	
fr83	9.9	fi13	4.4	es64	4.5	fr83	6.5	itg2	11.4	es63	4.2
es64	4.5	pt15	4.1	fr83	4	es63	4.2	es64	6	uki1	3.1
es63	4.2			pt30	3.3	es30	4	fr83	4.7	fr83	3.1
fi1a	3.8					pt15	3.9	itf6	3.4		
								uki1	3		

5. Descriptives indicators

Population Density						
	2001	2002	2003	2004	2005	2006
mean	445.7793	448.2912	450.5902	453.3052	456.3637	456.571
max	8904.5	9007.5	9073.4	9158.8	9318.8	9222.9
min	3.3	3.3	3.3	3.3	3.3	3.3
sd	1025.436	1034.186	1040.366	1047.583	1057.827	1055.603
variance	1051520	1069540	1082361	1097430	1118999	1114298
se(mean)	73.81252	74.44231	74.88718	75.40668	76.14407	75.98399
skewness	5.092869	5.121701	5.136874	5.152489	5.198014	5.164935
kurtosis	33.65692	34.02666	34.219	34.44478	35.12021	34.56648
p25	73.4	73.6	74	74.4	74.7	74
p50	162.7	163.6	164.4	165	167.4	165.7
p75	339.4	339.6	339.9	340.5	341.4	342.6

Sex Ratio						
	2001	2002	2003	2004	2005	2006
mean	96.00949	96.08879	96.18762	96.26816	96.36002	96.36474
max	107.4835	107.3994	107.2836	107.1601	107.1116	107.0229
min	88.69268	88.95178	88.9929	89.13847	89.22084	89.29746
sd	2.703626	2.693589	2.656708	2.615951	2.590428	2.635429
variance	7.309595	7.255422	7.058097	6.843202	6.710319	6.945488
se(mean)	0.191655	0.1909435	0.188329	0.1854399	0.1836306	0.1868206
skewness	0.901174	0.8836317	0.8660581	0.8576566	0.841714	0.7910759
kurtosis	5.579977	5.418059	5.332857	5.370664	5.298112	4.909185
p25	94.38689	94.37085	94.52521	94.57758	94.68468	94.64001
p50	95.66767	95.82291	95.85308	95.85281	95.96187	96.05921
p75	97.22728	97.28959	97.41887	97.51656	97.57224	97.75242

HURB1						
	2001	2002	2003	2004	2005	2006
mean	444.3243	446.945	458.9473	455.8964	469.7126	478.9899
max	4291.7	4258	4261	4269.3	4315	4368.8
min	9.9	2.9	16.2	18.3	18.7	4.6
sd	539.4164	541.7293	549.6841	543.4269	556.099	567.6066
variance	290970	293470.6	302152.7	295312.8	309246.1	322177.3
se(mean)	41.49357	41.67148	42.2834	41.9263	43.03223	43.7918
skewness	3.250079	3.185716	3.079155	3.0968	3.048602	3.000424
kurtosis	19.1079	18.37134	17.33937	17.76455	17.16192	16.68274
p25	106.1	105.2	101.8	114.65	119	122.2
p50	289.8	290.5	290.9	300.7	305.2	317.35
p75	542.8	551.8	544.1	536	559.9	563.65

GDP						
	2001	2002	2003	2004	2005	2006
mean	21566.32	22255.44	22479.27	23400.52	24202.07	25347.15
max	62500	66500	68600	72500	75900	79400
min	11800	12500	12700	12800	13700	14100
sd	6215.258	6407.132	6438.296	6723.989	6973.103	7269.944
variance	3.86E+07	4.11E+07	4.15E+07	4.52E+07	4.86E+07	5.29E+07
se(mean)	447.3841	461.1954	463.4387	484.0033	501.9349	523.302
skewness	2.226137	2.498229	2.655991	2.673502	2.777367	2.778132
kurtosis	13.55909	15.85705	17.32428	18.02323	18.88608	18.9686
p25	17600	18400	18600	19400	20000	20800
p50	20900	21500	21700	22500	23200	24600
p75	23700	24700	25100	26100	26800	28000

Households Disposable Income						
	2001	2002	2003	2004	2005	2006
mean	13655.77	14034.86	14090.19	14437.73	14979.97	15503.91
max	21506.1	20884.9	21648.2	22606.6	23840.4	25403.3
min	7594.2	8009.1	7863.6	6410.3	6242.7	6011.7
sd	2616.047	2548.409	2644.635	2813.484	2864.495	2947.35
variance	6843704	6494389	6994093	7915695	8205334	8686871
se(mean)	188.3072	183.4385	190.365	202.519	206.1909	212.1549
skewness	-0.0732296	-0.198766	-0.0913837	-0.2305276	-0.1685533	-0.1377052
kurtosis	2.738118	2.735093	2.734926	2.96644	3.034664	3.294441
p25	11795.5	12473.2	12321	12772.3	13085.9	13777.3
p50	13922.3	14426.8	14210.2	14653.9	15207	15604.1
p75	15274.1	15708.8	16039.5	16417.7	16979.1	17530

Employment Rate (15-24)						
	2001	2002	2003	2004	2005	2006
mean	42.06062	41.79326	41.13368	40.68808	40.56218	40.6943
max	73.4	76.1	71.8	70.3	70.7	73.8
min	12.3	12.1	11.6	15.6	12.5	14.9
sd	14.48455	14.28836	13.86809	13.28963	13.29292	13.14959
variance	209.8021	204.1572	192.324	176.6143	176.7017	172.9117
se(mean)	1.04262	1.028499	0.9982472	0.9566086	0.9568454	0.9465281
skewness	0.2054609	0.2694071	0.2151513	0.3643986	0.2148397	0.2039365
kurtosis	2.280264	2.398662	2.386012	2.281775	2.282359	2.332022
p25	30.4	30.7	31.9	31.3	31.9	30.7
p50	41.4	40.2	39.7	37.7	39.2	39.3
p75	52.6	52.5	51	50.6	50	51.1

Employment Rate (25-34)						
	2001	2002	2003	2004	2005	2006
mean	76.83316	76.85803	77.00829	77.04145	77.33005	78.1228
max	89	89.4	89	89.1	89.9	91
min	40	42.9	43.5	48.6	47.6	47.4
sd	8.524691	8.305887	7.892615	7.324889	7.491553	7.328938
variance	72.67035	68.98776	62.29337	53.654	56.12336	53.71333
se(mean)	0.6136207	0.5978708	0.5681228	0.5272571	0.5392538	0.5275485
skewness	-1.717418	-1.726188	-1.710793	-1.450997	-1.637286	-1.669241
kurtosis	6.927584	6.812209	7.115276	5.759912	6.395138	7.106668
p25	73.8	74	73.6	73.3	74.7	74.8
p50	78.5	78.4	78.3	78.5	78.8	79.3
p75	82.5	82.4	82.4	82.5	82.4	82.9

Employment Rate (45-54)						
	2001	2002	2003	2004	2005	2006
mean	74.62746	74.86477	75.56425	75.9513	77.00311	77.65648
max	88.2	87.5	89.4	87.7	89.5	90.4
min	54.5	54.9	52	55.7	56.9	48
sd	7.628894	7.413979	7.305557	6.910862	6.736792	6.788269
variance	58.20002	54.96709	53.37116	47.76001	45.38437	46.0806
se(mean)	0.5491398	0.5336699	0.5258655	0.4974547	0.4849249	0.4886303
skewness	-0.5845529	-0.6281211	-0.7491633	-0.6750268	-0.8741814	-1.185437
kurtosis	2.617245	2.852201	3.241988	3.231142	3.507308	4.756683
p25	69.3	69.9	71	71.9	74.2	74.5
p50	76	76.2	77.2	76.9	78	79.2
p75	80.3	80.3	80.7	80.6	82.2	82.3

Employment Part-time						
	2001	2002	2003	2004	2005	2006
mean	136.9472	139.8466	147.1321	155.2995	163.8005	171.6361
max	708.4	716.7	712.3	735.3	754.8	769.3
min	1.2	1.3	1.1	1.6	2.5	2.4
sd	124.3332	126.6898	128.7163	132.6487	138.5417	144.6206
variance	15458.74	16050.31	16567.88	17595.69	19193.8	20915.12
se(mean)	8.949698	9.119331	9.2652	9.548266	9.972448	10.46438
skewness	1.600546	1.610282	1.610641	1.587038	1.515609	1.485885
kurtosis	6.387623	6.381183	6.40888	6.323048	5.818569	5.557264
p25	40.3	41.2	53.1	65.8	68.1	75.3
p50	106.8	107.1	115.8	123.9	132.1	138.4
p75	197.7	193.5	204.4	214	219.6	236.8

Unemployment (25 max)						
	2001	2002	2003	2004	2005	2006
mean	6.060317	6.337566	6.544444	6.902674	6.793617	6.417895
max	21.2	20.3	20.3	22.6	21.4	19
min	1.2	1.6	1.9	1.7	1.8	2.1
sd	3.874942	3.873617	3.811326	3.841321	3.674054	3.316241
variance	15.01517	15.00491	14.52621	14.75575	13.49868	10.99746
se(mean)	0.2818605	0.2817642	0.2772332	0.2809052	0.267958	0.2405854
skewness	1.51623	1.51051	1.452838	1.37608	1.356977	1.360978
kurtosis	5.30666	5.325042	5.240212	5.408771	5.307083	5.184269
p25	3.3	3.4	3.6	3.9	3.9	3.7
p50	5.1	5.3	5.7	6.4	6.1	5.75
p75	7.7	8	8.3	8.8	8.65	7.9

Population Pre-primary, primary an Lower secondary education (POPEA)						
	2001	2002	2003	2004	2005	2006
mean	668.1979	663.9409	655.1176	645.5041	646.4984	642.6078
max	4761.8	4757.1	4628.6	4468.8	4483.8	4468.6
min	26.9	26.4	26.3	28.1	29.3	30.2
sd	759.6753	758.0946	749.1968	738.4468	730.4268	730.3015
variance	577106.5	574707.4	561295.9	545303.7	533523.4	533340.3
se(mean)	54.68262	54.56884	53.92837	53.15457	52.57727	52.56825
skewness	2.619605	2.625478	2.637201	2.632566	2.603548	2.6263
kurtosis	10.75781	10.81937	10.85642	10.80475	10.73178	10.88609
p25	249.6	242.3	244.3	241.5	233.5	234.2
p50	392.4	387.3	376.2	364.2	393.5	388.7
p75	756.3	740.4	726.6	725.5	728.1	710.8

Population Upper secondary and post-secondary non-tertiary education (POPEB)						
	2001	2002	2003	2004	2005	2006
mean	510.0497	528.7124	543.2565	556.4249	572.4642	580.1016
max	2904.5	2837.3	2786.6	2803.1	2851.9	2836.5
min	11.3	10.8	9.2	10.2	9.1	8
sd	460.1981	467.6334	469.8729	480.2781	492.8922	499.9509
variance	211782.3	218681	220780.5	230667	242942.7	249950.9
se(mean)	33.12578	33.66099	33.82219	34.57117	35.47916	35.98725
skewness	1.929008	1.845735	1.783928	1.822823	1.779659	1.754105
kurtosis	8.191033	7.572417	7.293266	7.509281	7.242459	7.071819
p25	204.7	207.6	211.7	219.8	220.3	224.7
p50	354.1	369.2	411.9	434.9	439.3	444.6
p75	723.3	739.4	744	745.9	770.4	779.9

Population Tertiary education (POPEC)						
	2001	2002	2003	2004	2005	2006
mean	238.8518	243.4808	256.3969	270.4808	283.3933	290.9487
max	2479.6	2562.7	2587.6	2638.6	2844.1	2867
min	6	6	6.1	7.9	8.4	7.8
sd	258.5963	265.5048	272.5481	282.0935	301.8739	307.369
variance	66872.05	70492.8	74282.46	79576.72	91127.86	94475.73
se(mean)	18.61417	19.11145	19.61844	20.30553	21.72936	22.12491
skewness	4.184013	4.300225	4.053871	3.925949	4.045775	3.956428
kurtosis	32.10929	33.25955	30.61287	28.84992	30.01936	28.81567
p25	87.8	91.4	97.6	105.2	110.4	114.4
p50	176.9	184.3	190.2	200.8	208.3	207.3
p75	281.7	298.2	319.7	336.7	343	340.7

Life-long Learning						
	2001	2002	2003	2004	2005	2006
mean	74.88534	75.72953	91.53679	91.70518	105.4927	104.4622
max	552.5	554.8	567.1	474.2	581.8	558.3
min	0.2	0.2	0.9	0.3	0.7	0.6
sd	80.56276	80.62302	88.32201	80.68872	96.72184	96.09452
variance	6490.358	6500.072	7800.777	6510.67	9355.115	9234.157
se(mean)	5.829317	5.803372	6.357557	5.808101	6.962191	6.917035
skewness	2.169075	2.126835	2.018268	1.718287	1.798964	1.826832
kurtosis	10.03592	9.923954	8.839737	6.961823	7.169468	7.192429
p25	20.5	20.2	32.2	36.2	40.1	42.5
p50	46.6	47.1	65.5	72.6	76.4	72.8
p75	111.7	110.5	125.7	122.5	142.7	143.5

Regional social benefits other than social benefits in kind (SECB)						
	2001	2002	2003	2004	2005	2006
mean	7757.834	8192.396	8447.928	8744.695	9050.84	9326.214
max	50660.6	54003.3	56413.5	58605.8	61315.9	63741.1
min	113.4	123.8	128.9	138.5	148.1	155.7
sd	6791.084	7173.195	7463.451	7715.561	7972.809	8261.937
variance	4.61E+07	5.15E+07	5.57E+07	5.95E+07	6.36E+07	6.83E+07
se(mean)	488.8329	516.3379	537.231	555.3783	573.8954	594.7073
skewness	2.356949	2.399241	2.482229	2.488309	2.524406	2.562466
kurtosis	12.6633	13.05997	13.57375	13.71994	14.11694	14.39152
p25	2924.7	3120.5	3258.9	3466	3684	3741.4
p50	6287.2	6571.6	6747.3	7047.3	7314.9	7587.2
p75	10367	10628.5	10736	10894.4	11336.6	11690.7

Secondary distribution social contibutions (SECS)						
	2001	2002	2003	2004	2005	2006
mean	7641.791	7940.973	8207.365	8527.616	8862.651	9267.361
max	76531.2	79698.6	82661.7	85347.6	89117.7	93219.2
min	137.7	147.9	153.7	157.3	172.8	179.2
sd	8078.568	8372.721	8673.978	8959.181	9286.292	9699.818
variance	6.53E+07	7.01E+07	7.52E+07	8.03E+07	8.62E+07	9.41E+07
se(mean)	581.5081	602.6816	624.3666	644.896	668.4419	698.2082
skewness	3.965544	4.012221	4.038578	4.018357	4.085181	4.086211
kurtosis	29.99123	30.55501	30.77149	30.64888	31.54187	31.62309
p25	2685.4	2857.3	2843.5	3143.5	3404.3	3563.4
p50	5549	5705	5888.9	6213	6491.3	6840.4
p75	9536.8	9816.9	10281	10837.5	10938.8	11695

Second income distribution current taxes on income (SECT)						
	2001	2002	2003	2004	2005	2006
mean	4664.79	4698.015	4675.344	4778.013	5025.108	5379.879
max	42593.9	42291.7	42602.2	43359.3	45938.3	47267.6
min	35.9	34.8	36.8	39.9	43.6	49.9
sd	5262.458	5233.642	5164.198	5271.872	5565.543	5964.802
variance	2.77E+07	2.74E+07	2.67E+07	2.78E+07	3.10E+07	3.56E+07
se(mean)	378.8	376.7258	371.7271	379.4776	400.6166	429.3559
skewness	3.398675	3.393558	3.447129	3.474708	3.479279	3.337649
kurtosis	20.55834	20.61371	21.47936	21.62626	21.61033	19.74098
p25	1561	1595.8	1634.9	1656.7	1695	1788.1
p50	3395.1	3355.3	3422.7	3484.4	3732.6	3963.2
p75	5906.1	5995.9	6001.3	6197.3	6399.5	6908.8

6. Factors loadings

AEC

Measurement Model URB and EW 06

Indicator	Un Factor Loading	C.R.	Errors	C.R.
DEN	1		0.013	22.487
HURB1	0.858	8.675	0.013	22.487
GDP	1.343	14.094	0.001	24
INCD	1		0.001	24

Measurement Model URB and EW 05

Indicator	Un Factor Loading	C.R.	Errors	C.R.
DEN	1		0.013	22.487
HURB1	0.833	8.527	0.013	22.487
GDP	1.335	14.265	0.001	24
INCD	1		0.001	24

Measurement Model URB and EW 04

Indicator	Un Factor Loading	C.R.	Errors	C.R.
DEN	1		0.013	22.487
HURB1	0.839	8.554	0.013	22.487
GDP	1.29	14.728	0.001	24
INCD	1		0.001	24

Measurement Model URB and EW 03

Indicator	Un Factor Loading	C.R.	Errors	C.R.
DEN	1		0.013	22.487
HURB1	0.849	8.651	0.013	22.487
GDP	1.386	13.885	0.001	24
INCD	1		0.001	24

Measurement Model URB and EW 02

Indicator	Un Factor Loading	C.R.	Errors	C.R.
DEN	1		0.013	22.487
HURB1	0.86	8.724	0.013	22.487
GDP	1.459	13.764	0.001	24
INCD	1		0.001	24

Measurement Model URB and EW 01

Indicator	Un Factor Loading	C.R.	Errors	C.R.
DEN	1		0.013	22.487
HURB1	0.867	8.731	0.013	22.487
GDP	1.406	14.417	0.001	24
INCD	1		0.001	24

LABC

Measurement Model LABC 06

Indicator	Un Factor Loading	C.R.	Errors	C.R.
EMPRD	0.86	13.738	0	24.968
EMPRB	1		0	24.968
EMPRA	1.776	10.802	0.001	8.335
UEMPC	-0.604	-11.34	0	8.014

Measurement Model LABC 05

Indicator	Un Factor Loading	C.R.	Errors	C.R.
EMPRD	0.826	13.886	0	24.968
EMPRB	1		0	24.968
EMPRA	1.823	11.673	0	8.132
UEMPC	-0.657	-11.756	0	7.946

Measurement Model LABC 04

Indicator	Un Factor Loading	C.R.	Errors	C.R.
EMPRD	0.878	13.95	0	24.968
EMPRB	1		0	24.968
EMPRA	1.842	11.385	0	8.296
UEMPC	-0.764	-12.853	0	7.361

Measurement Model LABC 03

Indicator	Un Factor Loading	C.R.	Errors	C.R.
EMPRD	0.851	15.216	0	24.968
EMPRB	1		0	24.968
EMPRA	1.815	12.492	0	8.237
UEMPC	-0.679	-13.235	0	7.808

Measurement Model LABC 02

Indicator	Un Factor Loading	C.R.	Errors	C.R.
EMPRD	0.806	15.84	0	24.968
EMPRB	1		0	24.968
EMPRA	1.784	13.434	0	8.176
UEMPC	-0.655	-14.017	0	7.828

Measurement Model LABC 01

Indicator	Un Factor Loading	C.R.	Errors	C.R.
EMPRD	0.787	16.333	0	24.968
EMPRB	1		0	24.968
EMPRA	1.734	13.649	0	8.234
UEMPC	-0.625	-14.039	0	7.978

EDU

Measurement Model EDU 06

Indicator	Un Factor Loading	C.R.	Errors	C.R.
POPEC	1.717	21.027	0.055	24
POPEB	2.07	15.311	0.055	24
POPEA	1.814	11.006	0.203	8.714
LLL	1		0.063	9.377

Measurement Model EDU 05

Indicator	Un Factor Loading	C.R.	Errors	C.R.
POPEC	1.757	19.126	0.055	24
POPEB	2.112	14.282	0.055	24
POPEA	1.855	10.524	0.203	8.71
LLL	1		0.07	9.472

Measurement Model EDU 04

Indicator	Un Factor Loading	C.R.	Errors	C.R.
POPEC	1.743	19.216	0.055	24
POPEB	2.125	17.033	0.055	24
POPEA	1.823	10.651	0.22	8.821
LLL	1		0.043	8.008

Measurement Model EDU 03

Indicator	Un Factor Loading	C.R.	Errors	C.R.
POPEC	1.911	14.802	0.055	24
POPEB	2.357	12.389	0.055	24
POPEA	1.997	8.738	0.229	8.869
LLL	1		0.076	9.339

Measurement Model EDU 02

Indicator	Un Factor Loading	C.R.	Errors	C.R.
POPEC	2.337	10.43	0.055	24
POPEB	2.937	9.058	0.055	24
POPEA	2.485	7.264	0.235	8.878
LLL	1		0.097	9.666

Measurement Model EDU 01

Indicator	Un Factor Loading	C.R.	Errors	C.R.
POPEC	2.504	9.614	0.055	24
POPEB	3.158	8.293	0.055	24
POPEA	2.67	7.033	0.233	8.871
LLL	1		0.101	9.735

INST

Measurement Model INST 06

Indicator	Un Factor Loading	C.R.	Errors	C.R.
SECB	0.931	37.172	0.001	24
SECS	0.937	38.654	0.001	24
SECT	1		0.014	7.632

Measurement Model INST 05

Indicator	Un Factor Loading	C.R.	Errors	C.R.
SECB	0.931	39.636	0.001	24
SECS	0.938	37.503	0.001	24
SECT	1		0.013	7.251

Measurement Model INST 04

Indicator	Un Factor Loading	C.R.	Errors	C.R.
SECB	0.931	39.978	0.001	24
SECS	0.939	35.595	0.001	24
SECT	1		0.013	7.203

Measurement Model INST 03

Indicator	Un Factor Loading	C.R.	Errors	C.R.
SECB	0.902	39.156	0.001	24
SECS	0.907	33.86	0.001	24
SECT	1		0.014	7.277

Measurement Model INST 02

Indicator	Un Factor Loading	C.R.	Errors	C.R.
SECB	0.9	39.618	0.001	24
SECS	0.9	34.532	0.001	24
SECT	1		0.014	7.26

Measurement Model INST 01

Indicator	Un Factor Loading	C.R.	Errors	C.R.
SECB	0.895	38.699	0.029	24.017
SECS	0.904	34.085	0.029	24.017
SECT	1		0.015	7.397

INST-EDU

Measurement Model INST-EDU 06

Indicator	Un Factor Loading	C.R.	Errors	C.R.
POPEC	1.65	23.15	0.048	25.949
POPEB	2.023	17.655	0.048	25.949
POPEA	1.661	12.139	0.236	9.583
LLL	1		0.054	10.706
SECS	0.943	36.96	0.027	25.144
SECT	1		0.116	8.999
SECB	0.935	36.869	0.027	25.144

Measurement Model INST-EDU 05

Indicator	Un Factor Loading	C.R.	Errors	C.R.
POPEC	1.688	20.739	0.048	25.949
POPEB	2.069	16.304	0.048	25.949
POPEA	1.704	11.739	0.232	9.571
LLL	1		0.063	10.746
SECS	0.949	36.828	0.027	25.144
SECT	1		0.117	8.972
SECB	0.944	36.767	0.027	25.144

Measurement Model INST-EDU 04

Indicator	Un Factor Loading	C.R.	Errors	C.R.
POPEC	1.733	20.093	0.048	25.949
POPEB	2.155	18.43	0.048	25.949
POPEA	1.73	11.951	0.249	9.617
LLL	1		0.042	9.628
SECS	0.952	36.15	0.027	25.144
SECT	1		0.123	9.063
SECB	0.946	36.088	0.027	25.144

Measurement Model INST-EDU 03

Indicator	Un Factor Loading	C.R.	Errors	C.R.
POPEC	1.829	16.464	0.048	25.949
POPEB	2.312	14.343	0.048	25.949
POPEA	1.833	10.459	0.257	9.687
LLL	1		0.067	10.128
SECS	0.922	34.579	0.027	25.144
SECT	1		0.142	9.142
SECB	0.92	34.544	0.027	25.144

Measurement Model INST-EDU 02

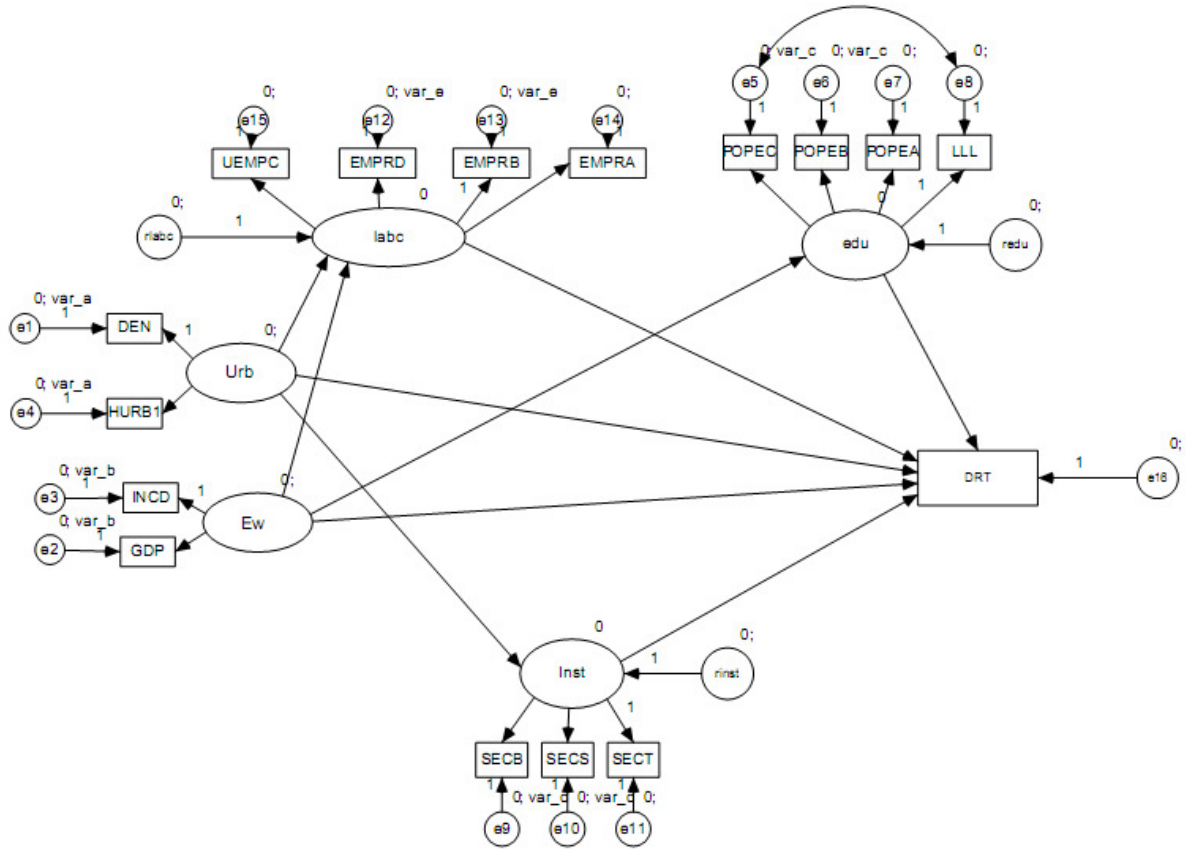
Indicator	Un Factor Loading	C.R.	Errors	C.R.
POPEC	2.102	12.532	0.048	25.949
POPEB	2.685	11.304	0.048	25.949
POPEA	2.129	9.014	0.264	9.634
LLL	1		0.083	10.058
SECS	0.916	35.145	0.027	25.144
SECT	1		0.141	9.092
SECB	0.917	35.133	0.027	25.144

Measurement Model INST-EDU 01

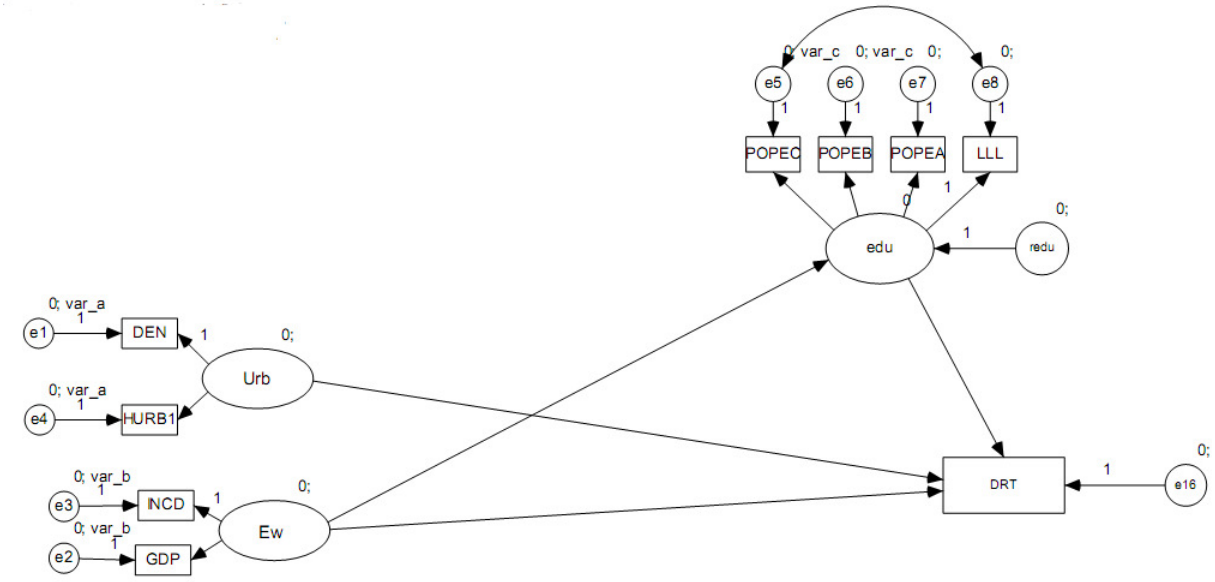
Indicator	Un Factor Loading	C.R.	Errors	C.R.
POPEC	2.171	12.052	0.048	25.949
POPEB	2.765	10.739	0.048	25.949
POPEA	2.2	8.736	0.26	9.577
LLL	1		0.086	10.122
SECS	0.922	34.746	0.027	25.144
SECT	1		0.148	9.093
SECB	0.913	34.67	0.027	25.144

7. SEM Amos models

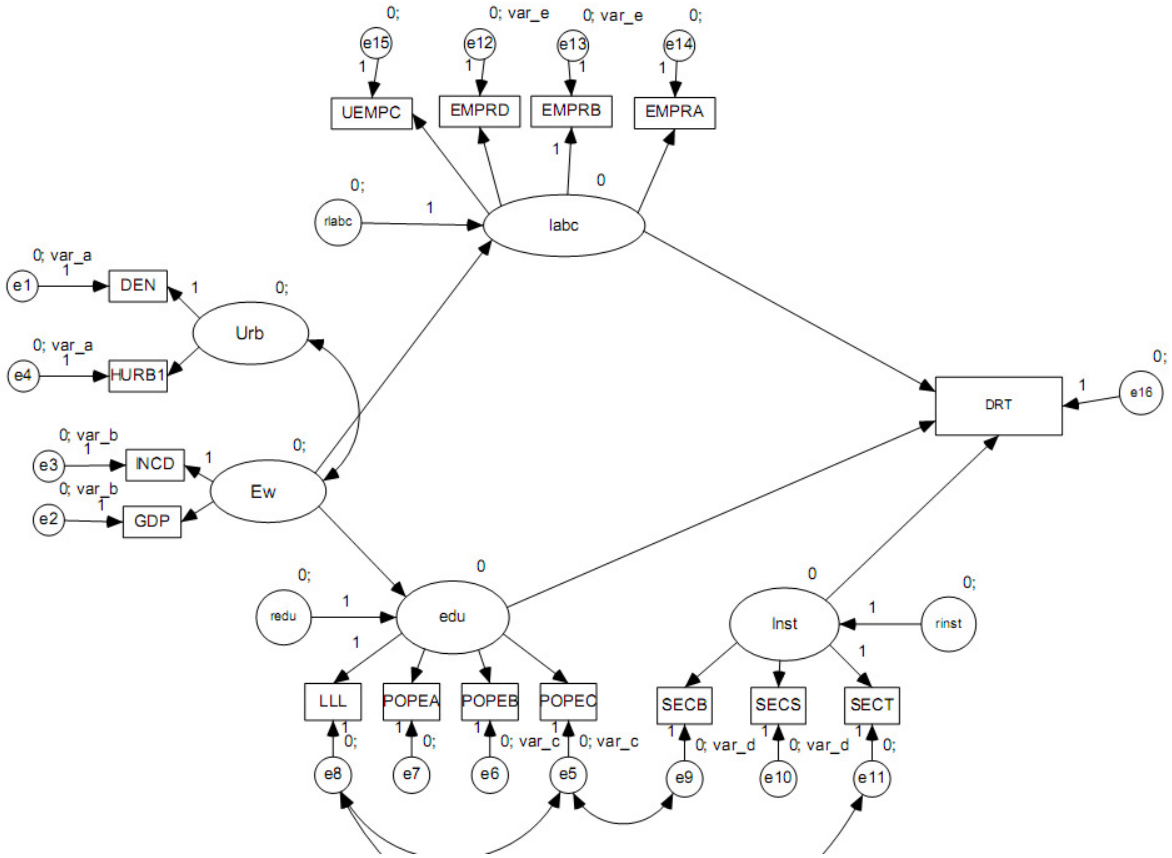
Model #1



Model #2



Model #3



8. DF of Factors and Models

DF of Factors and Models			
	Sample Moments (SM)	Parameters (p)	DF (SM-p)
AEC	84	56	28
LABC	84	61	23
EDU	84	73	11
INST	54	49	5
INST-EDU	210	128	82
5CFA	810	239	571
5CFA2	810	245	565
M#1	912	287	625
M#2	324	153	171
M#3	912	281	631

9. Table of alternative databases

Name	Type	Organization	Geographic Coverage	Time Span	Level	Data Recording Method	Data Reliability Controls	Indicator*	Definition	Pros	Contras
European Sourcebook	National Crime data	Council of Europe	36 EU countries	1990-2003	National	Questionnaire sent to official agencies and filled with data from crime reported to the police	Standard definition was used and countries were invited to follow the standard definition where possible. Validation procedures	Intentional Homicide	Intentional killing of a person, including: assault leading to death; euthanasia; infanticide; but excluding assistance with suicide	Specific data validation procedures	Only national level, Intentional Homicide sometimes includes assault (assault leading to death)
UNECE Database	Macroeconomic and gender statistics (including some data on crime victims)	United Nations Economic Commission for Europe	Europe, North America and Central Asia	95-05 (variable)	National	From national agencies	not specified	Homicide	Victims of homicide		
UN Common Data Base	National data on several issues	United Nations	Worldwide	(variable)	National	30 specialized international data sources	not specified	na	na		
Eurostat	National and Regional comparative data on a wide range of themes	European Union	EU members and candidates	1990-2004 (with some exceptions)	National and NUTS2	Data provided by the corresponding national statistical institutes (for homicide= Medical Death Certificates)	There is no systematic revision of previous year data. Data are occasionally revised, e.g. in case of changes in the NUTS or in case a country notifies Eurostat about any changes in the data.	Homicide and assault (crude death rate and standardised death rate)	WHO Definition. Deaths by homicide, assault and injuries inflicted by another person with intent to injure or kill, by any means (excluding legal intervention and operations of war)	Regional data NUTS 2 and time period	no differentiation between homicide and assault. Attempts are included
Crime in Europe Data	Regional and national crime data	Entorf and Spengler	8 EU countries	1980-1998	NUTS2,3	Questionnaires were sent to the national statistical institutions	not specified	Murder	Interpol definition	good indicator for homicide and big period of time	small number of cases
Urban Audit	Urban data	European Union	The 58 largest EU15 cities by population size within their administrative boundaries (not including London and Paris)	1981, 1991, 1996	Cities,WTU[1] and sub-city areas[2]	From national agencies	not specified	na	na	Dissagregation level, data on life quality	no data for the dependenr variable

Bibliography

Aebi, F. M. (2004). "Crime Trends in Western Europe From 1990 to 2000." European Journal on Criminal Policy and Research **10**: 163-186.

Agnew, R. (1992). "Foundation for a General Strain Theory." Criminology **30**(1): 47-87.

Agnew, R. and T. Brezina (1997). "Relational Problems with Peers, Gender, and Delinquency." Youth Society **29**(1): 84-111.

Albrecht, G. (2001). Soziale Ungleichheit, Deprivation und Gewaltkriminalität. Gewaltkriminalität zwischen Mythos und Realität G. Albrecht, O. Backes and W. Kühnel. Frankfurt a. M. , Suhrkamp**:** 195-235.

Albrecht, G. (2003). Sociological Approaches to Individual Violence and their Empirical Evaluation. Internationational Handbook on Violence Research. W. Heitmeyer and J. Hagan, Kluwer Academic**:** 611-656.

Almond, G. A. and S. Verba (1965). The Civic Culture: Political Attitudes and Democracy in Five Nations, an Analytic Study. Boston, Little.

Anderson, C. A. and B. J. Bushman (2002). "Human Aggression." Annual Review of Psychology **53**(1): 27-51.

Anderson, E. (1999). Code of the street : decency, violence, and the moral life of the inner city. New York, W.W Norton.

Apter, E. D. (1998). Comparative Politics, Old and New. A New Handbook of Political Science. R. E. Goodin and H.-D. Klingemann. Oxford, Oxford University Press**:** 372-398.

Archer, D. and R. Gartner (1984). Violence and Crime in Cross-national Perspective. New Haven, Yale University Press.

Barak-Glantz, I. L., E. H. Johnson, et al. (1983). Comparative criminology. Beverly Hills, Sage Publications.

Baumer, E. P. (2007). "Untangling research puzzles in Merton's multilevel anomie theory." Theoretical Criminology **11**(1): 63-93.

Becker, G. S. (1968). "Crime and Punishment: An Economic Approach." The Journal of Political Economy **76**(2): 169-217.

Becker, G. S., W. M. Landes, et al. (1974). Essays in the economics of crime and punishment. New York, National Bureau of Economic Research : distributed by Columbia University Press.

Beeghley, L. (2003). Homicide : a sociological explanation. Lanham, Md., Rowman & Littlefield.

Bernard, J. T. (1987). "Testing Structural Strain Theories." Journal of Research in Crime and Delinquency **24**(4): 262-280.

Besnard, P. (1988). "The True Nature of Anomie." Sociological Theory **6**(1): 91-95.

Besnard, P. (2005). Durkheim's squares: types of social pathology and types of suicide. The Cambridge Companion to Durkheim. J. C. Alexander and P. Smith. Cambridge, UK, Cambridge University Press.

Besnard, P. and W. S. F. Pickering (2002). Suicide and Anomie. Durkheim Today, Berghahn Books**:** 81-86.

Bijleveld, C. and P. Smit (2006). "Homicide in the Netherlands: On the Structuring of Homicide Typologies." Homicide Studies **10**(3): 195-219.

Blau, J. R. and P. M. Blau (1982). "The Cost of Inequality: Metropolitan Structure and Violent Crime." American Sociological Review **47**(1): 114-129.

Blau, P. M. (1977). Inequality and heterogeneity. New York, Free Press [u.a.].

Blau, P. M. (1986). "Metropolitan Structure and Criminal Violence." Sociological Quarterly **27**(1): 15.

Braithwaite, J. and V. Braithwaite (1980). "The Effect Of Income Inequality and Social Democracy on Homicide: A Cross-national Comparison " the British Journal of Criminology **20**: 45-53.

Breen, R. and J. O. Jonsson (2005). "Inequality of Opportunity in Comparative Perspective:Recent Research on Educational Attainment and Social Mobility." Annual Review of Sociology **31**(1): 223-243.

Brezina, T., R. Agnew, et al. (2004). "The Code of the Street: A Quantitative Assessment of Elijah Anderson's Subculture of Violence Thesis and Its Contribution to Youth Violence Research." Youth Violence and Juvenile Justice **2**(4): 303-328.

Cagetti, M. and M. De Nardi (2008). "Wealth Inequality: Data and Models." Macroeconomic Dynamics **12**(SupplementS2): 285-313.

Cantor, D. and C. K. Land (1985). "Unemployment and Crime Rates in the Post-World War II United States: A Theoretical and Empirical Analysis." American Sociological Review **50**(3): 317-332.

Chamlin, B. M. and K. J. Cochran (1995). "Institutional Anomie Theory: A Partial Test." Criminology **3**(33).

Chamlin, B. M. and K. J. Cochran (2007). "An evaluation of the assumptions that underlie institutional anomie theory." Theoretical Criminology **11**(1): 39-61.

Chamlin, B. M., H. G. Grasmick, et al. (1992). "Time Aggregation and Time Lag In Macro-Level Deterrence Research." Criminology **30**(3): 377-396.

Chamlin, M. B. and J. K. Cochran (2006). "Economic Inequality, Legitimacy, and Cross-National Homicide Rates." Homicide Studies **10**(4): 231-252.

Chamlin, M. B., J. K. Cochran, et al. (2002). "A Longitudinal Analysis of the Welfare-Homicide Relationship: Testing Two (Nonreductionist) Macro-Level Theories." Homicide Studies **6**(1): 39-60.

Clinard, M. B. (1964). Anomie and deviant behavior: a discussion and critique. New York, Free Press of Glencoe.

Clinard, M. B. (1978). Cities with little crime : the case of Switzerland. Cambridge [Eng.] ; New York, Cambridge University Press.

Cloward, R. A. and L. E. Ohlin (1960). Delinquency and opportunity; a theory of delinquent gangs. Glencoe, Ill.,, Free Press.

Cohen, A. K. (1955). Delinquent boys: the culture of the gang. Glencoe, Ill.,, Free Press.

Cohen, E. L. and M. Felson (1979). "Social Change and Crime Trends: A Routine Activity Approach." American Sociological Review **44**(4): 588-608.

Cohen, E. L., M. Felson, et al. (1980). "Property crime rates in the United States: A macrodynamic analysis 1947-1977 with ex ante forecast for the mid-1980s." American Journal of Sociology **86**: 90-118.

Crutchfield, R. D. and T. Wadsworth (2004). Poverty and Violence. International Handbook of Violence Research W. Heitmeyer and J. Hagan. Dordrecht, Kluwer academic 67-82.

Cullen, F. T. and S. F. Messner (2007). "The making of criminology revisited: An oral history of Merton's anomie paradigm." Theoretical Criminology **11**(1): 5-37.

Currie, E. (1997). "Market, Crime and Community: Toward a Mid-Range Theory of Post-Industrial Violence." Theoretical Criminology **1**(2): 147-172.

De, L. (1995). "Economic Development, Social Control, and Murder Rates: A Cross-National Approach." Cross-Cultural Research **29**(4): 361-382.

Deflem, M. (2004). "Classical Sociological Theory: A Review of Themes, Concepts, and Perspectives." from http://www.cas.sc.edu/socy/faculty/deflem/zClassics.htm

Dicristina, B. (2004). "Durkheim's Theory of Homicide and the Confusion of the Empirical Literature." Theoretical Criminology **8**(1): 57-91.

DiCristina, B. (2006). "Durkheim's Latent Theory of Gender and Homicide." British Journal of Criminology **46**: 212-233.

Dijk, J. J. M. v., P. Mayhew, et al. (1991). Experiences of crime across the world : key findings from the 1989 International Crime Survey. Deventer, Netherlands, Kluwer Law and Taxation.

Durkheim, E. and S. Lukes (1982). The rules of sociological method. New York, Free Press.

Ehrlich, I. (1974). Participation in Illegitimate Activities: an Economic Analysis. Essays in the Economics of Crime and Punishment. G. S. Becker. New York Columbia University Press.

Eide, E., J. Aasness, et al. (1994). Economics of crime : deterrence and the rational offender. Amsterdam ; New York, North-Holland.

Eisner, M. (2001). "Modernization, Self-Control and Lethal Violence. The Long-term Dynamics of European Homicide Rates in Theoretical Perspective." British Journal of Criminology **41**(4): 618-638.

Eisner, M. (2003). "Long-Term Historical Trends in Violent Crime, Crime and Justice." A Review of Research **30**: 83-142.

Elias, N. (1983). The court society. New York, Pantheon Books.

Elias, N. (1994). The civilizing process. Oxford [England] ; Cambridge, Mass., Blackwell.

Elliott, D. S., D. Huizinga, et al. (1985). Explaining delinquency and drug use. Beverly Hills, Calif., Sage Publications.

Elster, J. (1990). Nuts and bolts for the social sciences. Cambridge [u.a.], Cambridge University Press.

Elster, J. (1999). Alchemies of the mind : rationality and the emotions. Cambridge, U.K. ; New York, Cambridge University Press.

Entorf, H. and H. Spengler (2004). European Regional Crime Database, Darmstadt University of Technology.

EU (2010). European Regional and Urban Statistics (online). Brussels-Luxembourg, Eurostat.

EU (2010). European System of Accounts ESA 1995. Brussels-Luxembourg, Eurostat.

Eurostat (2009). European Regional and Urban Statistics Reference Guide. Methodologies and Working papers. Eurostat. Luxembourg, Office for Official Publications of the European Communities**:** 255.

Fajnzylber, P., D. Lederman, et al. (1998). What Causes Violent Crime? Washington, DC The World Bank.

Fajnzylber, P., D. Lederman, et al. (2002). "What causes violent crime?" European Economic Review **46**(7): 1323-1357.

Featherstone, R. and M. Deflem (2003). "Anomie and Strain: Context and Consequences of Merton's Two Theories." Sociological Inquiry **73**(4): 471-489.

Fiala, R. and G. LaFree (1988). "Cross-National Determinants of Child Homicide." American Sociological Review **53**(3): 432-445.

Frankel, C. (1948). The faith of reason; the idea of progress in the French enlightenment. New York,, King's Crown Press.

Freedman, D. A. (1991). "Statistical Models and Shoe Leather." Sociological Methodology **21**: 291-313.

Garland, D. (1997). Of Crime and Criminals: The Development of Criminology in Britain. The Oxford Handbook of Criminology. M. Maguire, R. Morgan and R. Reiner. Oxford, Clarendon Press**:** 11-57.

Gibbs, J. P. (1982). Social control : views from the social sciences. Beverly Hills, Calif., Sage Publications.

Gibbs, J. P. (1989). Control : sociology's central notion. Urbana, University of Illinois Press.

Godfrey, B., C. Emsley, et al., Eds. (2003). Comparative Histories of Crime Cullompton, Willan.

Goertzel, T. and B. Goertzel (2008). "Capital Punishment and Homicide Rates: Sociological Realities and Econometric Distortions." Crit Sociol **34**(2): 239-254.

Gottfredson, M. R. and T. Hirschi (1990). A General Theory of Crime. Stanford, Calif., Stanford University Press.

Gruszczynska, B. (2004). "Crime in Central and Eastern European Countries in the Enlarged Europe." European Journal on Criminal Policy and Research **10**(2-3): 123-136.

Gurr, T. R. (1981). "Historical Trends on Violent Crime: a Critical Review of the Evidence " Crime and Justice. An Annual Review of Research(3): 259-350.

Gurr, T. R. (1989). Violence in America. Newbury Park, Calif., Sage Publications.

Haen-Marshall, I. (2001). "The Criminological Enterprise in Europe and the United States: A Contextual Exploration." European Journal on Criminal Policy and Research **9**(3): 235-257.

Hagan, J. (1993). "The Social Embeddedness of Crime and Unemployment " Criminology **31**(4): 465-491.

Hagan, J. and R. D. Peterson (1995). Crime and inequality. Stanford, Calif., Stanford University Press.

Hedström, P. and R. Swedberg (1996). "Social Mechanisms." Acta Sociologica **39**(3): 281-308.

Hedström, P. and R. Swedberg, Eds. (1998). Social Mechanisms: an Analytical Approach to Social Theory. Cambridge Cambridge University Press.

Heiland, H. and L. Shelley (1992). Civilization, modernization and the development of crime control Crime and control in comparative perspectives. H. Heiland, L. Shelley and H. Katoh. New York Walter de Gruyter**:** 1-19.

Henry, S. and M. Lanier (2006). The essential criminology reader. Boulder, Colo, Westview Press.

Hirschi, T. (1969). Causes of delinquency. Berkeley,, University of California Press.

Horwitz, A. V. (1984). "The Economy and Social Pathology." Annual Review of Sociology **10**: 95-119.

Hsieh, C.-C. and M. D. Pugh (1993). "Poverty, Income Inequality, and Violent Crime: A Meta-Analysis of Recent Aggregate Data Studies." Criminal Justice Review **18**(2): 182-202.

Huang, W. S. W. (1995). "A Cross-National Analysis on the Effect of Moral Individualism on Murder Rates." International Journal of Offender Therapy and Comparative Criminology **39**(1): 63-75.

Jackson, D. (2000). The new national accounts : an introduction to the system of national accounts 1993 and the European system of accounts 1995. Cheltenham, UK ; Northampton, MA, Edward Elgar.

Karmen, A. (2009). Crime victims : an introduction to victimology. Belmont, CA, Wadsworth.

Kelly, M. (2000). "Inequality and Crime." The Review of Economics and Statistics **82**(4): 530-539.

Kick, E. and G. LaFree (1985). "Development and the social context of murder and theft." Comparative Social Research **8**: 37-57.

Killias, M. and F. M. Aebi (2000). "Crime Trends in Europe from 1990 to 1996: how Europe illustrates the limits of the American experience." European Journal on Criminal Policy and Research(8): 43-63.

Kim, S.-W. and W. A. Pridemore (2005). "Poverty, Socioeconomic Change, Institutional Anomie, and Homicide." Social Science Quarterly **86**(s1): 1377-1398.

Kim, S.-W. and W. A. Pridemore (2005). "Social Change, Institutional Anomie and Serious Property Crime in Transitional Russia." Br J Criminol **45**(1): 81-97.

King, G., R. O. Keohane, et al. (1994). Designing social inquiry : scientific inference in qualitative research. Princeton, N.J., Princeton University Press.

Koffman, L. (1996). Crime surveys and victims of crime. Cardiff, University of Wales Press.

Krahn, H., T. F. Hartnagel, et al. (1986). "Income Inequality and Homicide Rates: Cross-national Data and Criminological Theories." Criminology **24**(2): 269-294.

Krohn, M. D. (1978). "A Durkheimian Analysis of International Crime Rates." Social Forces **52**(2): 654-670.

Kubrin, C. E. (2003). "Structural Covariates Of Homicide Rates: Does Type Of Homicide Matter?" Journal of Research in Crime and Delinquency **40**(2): 139-170.

Kubrin, C. E. and R. Weitzer (2003). "New Directions in Social Disorganization Theory." Journal of Research in Crime and Delinquency **40**(4): 374-402.

LaFree, G. (1999). A Summary and Review of Cross-National Comparative Studies of Homicide. Homicide: A Sourcebook of Social Research. M. D. Smith and A. M. Zahn. Thousand Oaks, CA, Sage**:** 124-148.

LaFree, G. and E. Kick (1986). "Cross-national effects of developmental, distributional, and demographic variables on crime: A review and analysis." International Annals of Criminology **24**: 269-295.

Land, C. K., D. Cantor, et al. (1995). Unemployment and crime rate fluctuations in the post-World War II Unites States. Crime and Inequality. J. Hagan and D. Peterson Ruth. Stanford, CA, Stanford University Press**:** 55-79.

Land, K. C., P. L. McCall, et al. (1990). "Structural Covariates of Homicide Rates: Are There Any Invariances Across Time and Social Space?" The American Journal of Sociology **95**(4): 922-963.

Leavitt, G. C. (1992). "General Evolution and Durkheim's Hypothesis of Crime Frequency: A Cross-Cultural Test." Sociological Quarterly **33**(2): 241.

Lessan, G. T. (1991). "Macro-Economic Determinants of Penal Policy: Estimating the Unemployment and Inflation Influences on Imprisonment Rate Changes in the United States, 1948-1985." Crime, Law, and Social Change **16**(2): 177-198.

Marwah, S., M. Deflem, et al. (2006). Revisiting Merton: Continuities in the Theory of Anomie-and-Opportunity-Structures. Sociological Theory and Criminological Research: Views from Europe and the United States. Amsterdam, Elsevier**:** 57-76.

Mayntz, R. (2004). "Mechanisms in the Analysis of Social Macro-Phenomena." Philosophy of the Social Sciences **34**(2): 237-259.

McAdam, D., S. Tarrow, et al. (2008). "Methods for Measuring Mechanisms of Contention." Qualitative Sociology **31**(4): 307-331.

McCall, P. L. and P. Nieuwbeerta (2007). "Structural Covariates of Homicide Rates: A European City Cross-National Comparative Analysis." Homicide Studies **11**(3): 167-188.

McCarthy, B. (2002). "New Economics of Sociological Criminology." Annual Review of Sociology **28**(1): 417-442.

Meier, R. F., Ed. (2001). The Process and Structure of Crime. criminal events and crime analysis. New Brunswick, N.J. [u.a.], Transaction Publ.

Merton, R. K. (1938). "Social Structure and Anomie." American Sociological Review **3**(5): 672-682.

Merton, R. K. (1964). Anomie, Anomia and Social Interaction: Contexts of Deviant Behavior. . Anomie and Deviant Behavior. M. B. Clinard. New York, The Free Press**:** 213-242.

Merton, R. K. (1968). Social theory and social structure. New York,, Free Press.

Merton, R. K. (1995). Opportunity Structure: The Emergence, Diffusion, and Differentiation of a Sociological Concept 1930-1950. The Legacy of Anomie Theory. F. Adler and W. S. Laufer. New Brunswick, NJ, Transaction Publishers. **6:** 3-78.

Messner, S. F. (1982). "Societal Development, Social Equality, and Homicide: A Cross-National Test of a Durkheimian Model." Social Forces **61**(1): 225-240.

Messner, S. F. (2003). "An Institutional-Anomie Theory of Crime: Continuities and Elaborations in the Study of Social Structure an Anomie." Kölner Zeitschrift für Soziologie und Sozialpsychologie(43): 93-109.

Messner, S. F. (2003). Understanding Cross-National Variation in Criminal Violence. International Handbook of Violence Research
W. Heitmeyer and J. Hagan. Dordrecht ; Boston, Kluwer Academic Publishers**:** 701-716.

Messner, S. F. and R. M. Golden (1992). "Racial Inequality and Racially Disaggregated Homicide Rates: An Assessment of Alternative Theoretical Explanations." Criminology **30**(3): 421-448.

Messner, S. F., B. Pearson-Nelson, et al. (2008). Cross-national homicide trends in the latter decades of the 20th century. Losses and gains in institutional control? Control of Violence. ZIF-Bielefeld.

Messner, S. F. and R. Rosenfeld (1997). Crime and the American dream. Belmont, CA, Wadsworth Pub. Co.

Messner, S. F. and R. Rosenfeld (1997). "Political Restrain of the Market and Levels of Criminal Homicide: A Cross-National Application of Institutional Anomie." Social Forces **75**: 1393-1416.

Messner, S. F. and R. Rosenfeld (1999). Social Structure and Homicide: Theory and Research Homicide Studies: A Sourcebook of Social Research. M. D. Smith and A. M. Zahn. Newbury Park, CA, Sage**:** 27-41.

Messner, S. F. and R. Rosenfeld (2004). ""Institutionalizing" Criminological Theory." Advances in Criminological Theory(13): 83-105.

Messner, S. F. and R. Rosenfeld (2008). Self-control, Anomie, and Social Institutions. Out of control E. Goode. Stanford, California, Stanford university press**:** 90-101.

Messner, S. F. and R. Rosenfeld (2009). The Present and Future of Institutional-Anomie Theory. Taking stock: the status of criminological theory. F. T. Cullen. New Brunswick, NJ [u.a.], Transaction Publ. **15:** 127-148.

Messner, S. F., R. Rosenfeld, et al. (1999). Social Structure and Homicide: Theory and Research. Homicide: A Sourcebook of Social Research, Sage**:** 27-41.

Messner, S. F., H. Thome, et al. (2008). "Institutions, Anomie, and Violent Crime: Clarifying and Elaborating Institutional-Anomie Theory." International Journal of Conflict and Violence **2**(2): 163-181.

Mestrovic, S. G. and H. M. Brown (1985). "Durkheim's Concept of Anomie as Dereglement " Social Problems **33**(2): 81-99.

Miller, E. E. (2005). Race, Neighborhood Disadvantage, and Retaliatory Homicide. College Park, Md., University of Maryland**:** 1-82.

Moniruzzaman, S. and R. Andersson (2005). "Age- and sex-specific analysis of homicide mortality as a function of economic development: A cross-national comparison." Scandinavian Journal of Public Health **33**(6): 464 - 471.

Monkkonen, E. H. (2001). "New Standards for Historical Violence Research." Crime, History, Society **5**: 5-26.

Moore, B. (1966). Social Origins of Dictatorship and Democracy; Lord and Peasant in the Making of the Modern World. Boston,, Beacon Press.

Nagin, S. D. (1998). "Criminal Deterrence Research at the Outset of the Twenty-First Century." Crime and Justice **23**: 1-42.

Neapolitan, J. L. (1997). Cross-national crime : a research review and sourcebook. Westport, Conn., Greenwood Press.

Neapolitan, J. L. (2003). "Explaining Variation in Crime victimization Across Nations and within Nations." International Criminal Justice Review **13**(76): 76-89.

Neckerman, K. M. and F. Torche (2007). "Inequality: Causes and Consequences." Annual Review of Sociology **33**(1): 335-357.

Nelken, D. (1997). Understanding Criminal Justice Comparatively. The Oxford Handbook of Criminology. M. Maguire, R. Morgan and R. Reiner. Oxford, Clarendon Press**:** 559-573.

Neuman, W. L. and R. J. Berger (1988). "Competing Perspectives on Cross-national Crime: an evaluation of theory and evidence." Sociological Quarterly **29**(2).

Neumayer, E. (2005). "Inequality and Violent Crime: Evidence from Data on Robbery and Violent Theft." Journal of Peace Research **42**(1): 101-112.

Oberwittler, D. (2007). The Effects of Ethnic and Social Segregation on Children and Adolescents: Recent Research and Results from a German Multilevel Study. Berlin, Social Science Research Center

Oberwittler, D. and S. Karstedt, Eds. (2004). Soziologie der Kriminalität. Kölner Zeitschrift für Soziologie und Sozialpsychologie: Sonderhefte. Wiesbaden, VS, Verl. für Sozialwiss.

OECD (2009). OECD Regional Statistics and Indicators.

Orru, M. (1983). "The Ethics of Anomie: Jean Marie Guyau and Émile Durkheim " The British Journal of Sociology **34**(4): 499-518.

Ortega, S., J. Corzine, et al. (1992). "Modernization, Age Structure, and Regional Context: A Cross-National Study of Crime." Sociological Spectrum **12**(3): 257-277.

Parker, K. F., P. L. McCall, et al. (1999). Determining Social Structural Predictors of Homicide: Unit of Analysis and Other Methodological Concerns. Homicide: A Sourcebook of Social Research. M. D. Smith and A. M. Zahn. Thousand Oaks, CA, Sage**:** 107-124.

Parker, R. N. and M. D. Smith (1979). "Deterrence, Poverty, and Type of Homicide." The American Journal of Sociology **85**(3): 614-624.

Passas, N. and R. Agnew (1997). The future of anomie theory. Boston, Northeastern University Press.

Peters, B. G. (2001). Comparative Politics: Theory and Methods. Basingstoke, Hampshire, Palgrave.

Peterson, R., D. and L. J. Krivo (2005). "Macrostructural Analyses of Race, Ethnicity, and Violent Crime: Recent Lessons and New Directions for Research." Annual Review of Sociology **31**: 331-356.

Peterson, R. D., L. J. Krivo, et al. (2000). "Disadvantage and Neighborhood Violent Crime: Do Local Institutions Matter?" Journal of Research in Crime and Delinquency **37**(1): 31-63.

Piquero, A. and N. L. Piquero (1998). "On Testing Institutional Anomie Theory with Varying Specifications." Studies on Crime and Crime Prevention **7**(1): 61-84.

Pizarro, J. M. (2008). "Reassessing the Situational Covariates of Homicides: Is There a Need to Disaggregate?" Homicide Studies **12**(4): 323-349.

Pratt, T. C. and F. T. Cullen (2005). Assessing Macro-Level Predictors and Theories of Crime: A Meta-Analysis. Crime and Justice: A Review of Research. M. Tonry. Chicago, University of Chicago Press. **32**.

Pratt, T. C. and C. T. Lowenkamp (2002). "Conflict Theory, Economic Conditions, and Homicide: A Time-Series Analysis." Homicide Studies **6**(1): 61-83.

Pridemore, W. A. (2002). "What we know about social structure and homicide: A review of the theoretical and empirical literature." Violence and Victims **17**: 127-156.

Pridemore, W. A. (2003). "Measuring homicide in Russia: a comparison of estimates from the crime and vital statistics reporting systems." Social Science and Medicine **57**(8): 1343-1354.

Pridemore, W. A. (2006). "An Exploratory Analysis of Homicide Victims, Offenders, and Events in Russia." International Criminal Justice Review **16**(1): 5-23.

Pridemore, W. A. (2008). "a Methodological Addition to the Cross-national Empirical Literature on Social Structure and Homicide: a first test of the poverty-homicide thesis*." Criminology **46**(1): 133-154.

Pridemore, W. A., M. B. Chamlin, et al. (2007). "An Interrupted Time-Series Analysis of Durkheim's Social Deregulation Thesis: The Case of the Russian Federation." Justice Quarterly **24**(2): 271 - 290.

Quinney, R. (1969). Crime and justice in society. Boston,, Little.

Quinney, R. (1970). The social reality of crime. Boston,, Little.

Rock, P. (1997). Sociological Theories of Crime. The Oxford Handbook of Criminology. M. Maguire, R. Morgan and R. Reiner. Oxford, Oxford University Press**:** 233-264.

Rusche, G. and O. Kirchheimer (1939). Punishment and Social Structure. New York, Columbia Univ. Press.

Sampson, J. R., W. J. Wilson, et al. (1995). Toward a Theory of Race, Crime, and Urban Inequality. Crime and Inequality. Stanford, Stanford University Press.

Sampson, RobertÂ J. (2008). "Moving to Inequality: Neighborhood Effects and Experiments Meet Social Structure." American Journal of Sociology **114**(1): 189-231.

Sampson, R. J., J. D. Morenoff, et al. (2002). "Assesing "Neighborhood Effects": Social Processes and New Directions in Research." Annual Review of Sociology **28**(1): 443-478.

Sampson, R. V. (1956). Progress in the age of reason; the seventeenth century to the present day. London,, Heinemann.

Savage, J., R. R. Bennett, et al. (2008). "Economic Assistance and Crime: A Cross-National Investigation." European Journal of Criminology **5**(2): 217-238.

Savolainen, J. (2000). "Inequality, Welfare State, and Homicide: Further Support for the Institutional Anomie Theory." Criminology **38**: 1021-1039.

Schmidt, P. and A. D. Witte (1984). An economic analysis of crime and justice : theory, methods, and applications. Orlando, Fla., Academic Press.

Shaw, C. R. and H. D. McKay (1942). Juvenile delinquency and urban areas, a study of rates of delinquents in relation to differential characteristics of local communities in American cities. Chicago, Ill.,, The University of Chicago Press.

Shelley, L. I. (1981). Crime and modernization : the impact of industrialization and urbanization on crime. Carbondale, Southern Illinois University Press.

Sheptycki, J. W. E. and A. Wardak, Eds. (2005). Transnational and comparative criminology. London ; Portland, Or., GlassHouse.

Short, J. F. (1997). Poverty, ethnicity, and violent crime. Boulder, Colo., WestviewPress.

Skocpol, T. (1979). States and Social Revolutions : a Comparative Analysis of France, Russia, and China. Cambridge ; New York, Cambridge University Press.

Stamatel, J. P. (2008). "Using Mortality Data to Refine Our Understanding of Homicide Patterns in Select Postcommunist Countries." Homicide Studies **12**: 117-135.

Stouffer, S. A. (1949). The American Soldier. Princeton,, Princeton University Press.

Sutherland, E. H. (1947). Principles of criminology. Chicago,, J.B. Lippincott Co.

Taylor, I. (1997). The Political Economy of Crime. The Oxford Handbook of Criminology M. Maguire, R. Morgan and R. Reiner. Oxford, Oxford University Press**:** 265-303.

Thome, H. (2000). Das Konzept sozialer Anomie als Analyseinstrument. Diktatur, Demokratisierung und soziale Anomie. Universität Augsburg.

Thome, H. (2001). "Explaining Long Term Trends in Violent Crime." Crime, Histoire & Sociétés / Crime, History & Societies **5**(2): 69-86.

Thome, H. (2007). "Explaining the Long-Term Trend in Violent Crime: A Heuristic Scheme and Some Methodological Considerations." International Journal of Conflict and Violence **1**(2): 185-202.

Thorlindsson, T. and B. J. B. (2004). "Durkheim's Theory of Social Order and Deviance: a Multi-level Test." European Sociological Review **20**(4): 271-285.

Tilly, C. (1980). "Historical Sociology." Current Perspectives in Social Theory **I**: 55-59.

Tilly, C. (2001). "Mechanisms in Political Processes." Annual Review of Political Science **4**(1): 21-41.

Tilly, C. (2003). The politics of collective violence. Cambridge ; New York, Cambridge University Press.

Tittle, C. R. and W. J. Villemez (1977). "Social Class and Criminality." Social Forces **56**(2): 474-502.

Tittle, C. R., W. J. Villemez, et al. (1978). "The Myth of Social Class and Criminality: An Empirical Assessment of the Empirical Evidence." American Sociological Review **43**(5): 643-656.

Turner, J. (2006). Micro-Macro Theory. Cambridge Dictionary of Sociology, Cambridge University Press.

Vold, G. B. (1958). Theoretical criminology. New York,, Oxford University Press.

von Neumann, J. and O. Morgenstern (1944). Theory of Games and Economic Behavior. Princeton NJ, Princeton University Press.

Wiers, P. (1945). "Wartime Increases in Michigan Delinquency." American Sociological Review **10**(4): 515-523.

Williams, K. R. (1984). "Economic Sources of Homicide: Reestimating the Effects of Poverty and Inequality." American Sociological Review **49**(2): 283-289.

Wilson, W. J. (1987). The Truly Disadvantaged: The Inner City, the Underclass and Public Policy. Chicago, Chicago University Press.