

## 10 An analytical perspective on the study of crime at multiple levels

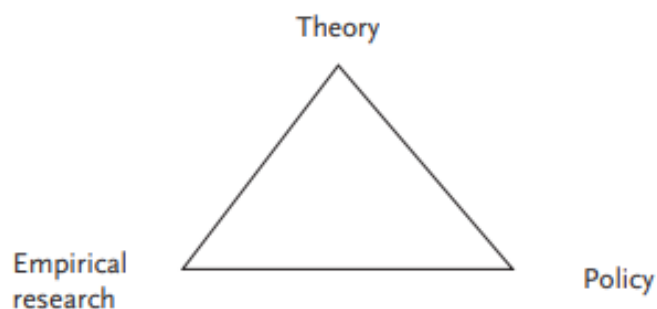
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### 10.1 Theoretical improvement in the study of crime as social fact and individual act

Why are some societies more crime-prone and why do some individuals commit acts of crime more often than others? These questions remain fundamental for criminology and criminal policy. The answers to such questions determine our judgments on crime as a social phenomenon, and the individuals who commit crime (Wikström, 2004). Beyond that, the answers to these questions also influence how we react to crime through criminal policy measures, crime prevention and the criminal justice system. Policy measures need to be accurate and effective, i.e. they must succeed in reducing crime as a social phenomenon. Therefore policy measures need to influence factors that are causally related to crime.

For many decades developing etiological theories was done relatively independently of empirical analysis. Classic etiological theories provided explanations for the differences in crime at the level of societies, neighbourhoods and ultimately individuals. At the same time, empirical analyses conducted at that time had many flaws characterized and this led to a gap between theory and empirical analysis. Fortunately, more recently formulated theories are the result of new research findings and empirical developments (Bruinsma & Weerman, 2007). This contribution aims to reduce the gap between theory and empirical research even more. After all, what is the point of theories that lack empirical foundations? Theories of crime causation should have strong empirical grounds, i.e. they should be rooted in social reality. The role of theories is to improve our understanding of the social world around us. 'Without a theory, empirical research often lacks wider significance, and without empirical research, sociological theory easily turns into fictitious storytelling' (Hedström, 2005, p. 114, see also Elster, 1989, p. 7-8).

Figure 17: The relationship between theory, empirical research and policy



Our starting point is that one always needs to find a balance between theory, empirical research and criminal policy. If one puts too much emphasis on one of the aspects in Figure 17,

reification can be the result.<sup>100</sup> If we emphasise theory too much, and thus neglect empirical research and criminal policy, scientific activity will be reduced to ‘practicing science for its own sake’: criminology will be reduced to prosaic texts. A theory-driven criminology that lacks empirical grounds and policy relevance puts the scientist in his ‘Ivory Tower’. Putting too much emphasis on empirical research, and thereby ignoring theory and policy, leads to blind empiricism, the reification of science as number crunching and fetishism of the number. Science is then reduced to a collection of data that is carefully ranked and reported in a book of results but without meaning or social and policy relevance. The result is a patchwork of observations that grows endlessly, without direction, meaning and use. Science that is too narrowly related to policy is also reification. In this situation, science is reduced to a technical instrument of criminal policy that adopts unverified theories without trying to empirically test their underlying hypotheses. Science then is merely a technical instrument to confirm hypotheses that were formulated a long time ago by policy makers. Criminological research should be relevant for policy, not per se supportive of policy.

In this contribution we want to draw attention to and stimulate the theoretical study of crime causation, i.e. the etiology of crime occurrence and offending. One could argue that there are too many theories on these subjects already. Criminologists are familiar with the ‘classics’ such as Merton’s Anomie Theory or Hirschi’s Control Theory. Yet, despite a proliferation of theories, theoretical improvement has not always been the result. To stimulate theoretical improvement, we want to present an approach to the study of crime at multiple levels that is deeply rooted in the fundamentals of sociology. We are convinced that this approach not only serves the scientific study of etiological research, i.e. the study of crime as the commitment of acts, but it also leads to a balanced relationship between theory, empirical research and policy. Although this approach is applied to studying the causes of offending, it could also be applied to other theoretical frameworks since we put forward a general style of theorising.

Our point of view is that mechanism-based action orientated explanations can be applied in the field of criminology. The key philosophy behind this approach is that social phenomena (such as the amount of crime occurring in a society, or offending by individuals) need to be explained from a constellation of social factors, participants and their actions and reactions, that are related to the dependent variable in such a way that they usually bring about the social phenomenon or action that we try to explain (Hedström, 2005). The concept of action refers to observable actions, behaviours and attitudes of actors in the social reality. The idea is that actions of individuals shape a society. Micro-micro statements are about the effects of individual level conditions or attitudinal characteristics on individual level actions or behaviours, while macro-macro statements explain differences in the occurrence of acts of crime at (multiple) societal levels, such as cities, neighbourhoods and schools.

Within the field of sociology, it was Coleman (1986) in particular who brought macro-micro relationships and statements to the attention of scholars. Coleman (1986) strongly supported what he referred to as ‘methodological individualism’. Methodological individualism means that aggregate level correlations or societal outcomes should be seen as consequences of acts of individuals that are part of the aggregate. Coleman’s methodology is an important anchoring point in the study of crime at multiple levels of analysis.

We refer to this approach as analytical criminology. This way of theorising is a scientific realist approach to crime that is rooted within the tradition of analytical sociology (for a discussion

see Hedström & Swedberg, 1998; Hedström, 2005). ‘Analytical sociology seeks to explain complex social processes by carefully dissecting them and then bringing into focus their most important constituent components. It is through dissection and analytical abstraction that the important cogs and wheels of social processes are made visible and intelligible’ (Edling & Hedström, 2005, p.1). An analytical approach to crime differs from classical etiological studies in that many more attempts are undertaken to visualise and expose the social processes that are actually at work when an explanation of crime is formulated.

The analytical approach to crime as action is influenced by scientific realism, today’s answer to the positivist approach (Bunge, 2004). Let us therefore clarify the difference between scientific realism and the positivist approach to crime.

## **10.2 From a positivist approach to scientific realism**

Within the field of criminology, several philosophical traditions or paradigms exist. Some scholars have argued that paradigms can be considered as either ‘positivist’ or ‘symbolic interactionist’ (Edling, 2007). We do not agree with this oversimplification of reality. In fact, some theories of crime causation share propositions of symbolic interactionism, such as Sampson and Laub’s theory of cumulative disadvantage (1997). In that theory, crime is not exclusively explained by the characteristics of individuals involved, but attention is also paid to the relatively persistent character of serious offending by small groups of adolescents. That is where influences of symbolic interactionism come into the picture. The theory states that a harsh reaction (e.g. by the State or the police) can explain the ongoing character of offending among recidivists. In our view, this theoretical dichotomy or ‘clash between theoretical paradigms’ can be put down to tensions between researchers that preferred causal (‘nomological’) traditions and those that prefer hermeneutic (‘interpretative’ or ‘verstehende’) traditions in criminology. These tensions peaked in the 1960s and 70s. Fortunately tensions and mutual misunderstandings as a result of extreme interpretations of positivism and constructivism have by and large declined. We are convinced that it is of great importance that at least some healthy tensions should exist between paradigms, as long as they contribute to a fruitful discussion and an increase in knowledge relevant to criminology.

Unfortunately such strong tensions did not completely disappear. In some academic circles (within criminology and sociology) research on causes of crime is still considered ‘not done’ (Edling, 2007). Scholars that conduct etiological research are often depicted as being unwilling to admit that crime is a socially constructed reality (Jupp, 1989; Radzinowics, 1966). It has nevertheless been underscored many times that researchers who focus on moral rule breaking do not per se see crime as a characteristic that is exclusively attributable to people (Olaussen, 2004; Pauwels, 2007). Such a view is referred to as the ontological point of view on crime. We are convinced that an ontological view should be abandoned as well because it does not recognise the sociological view on ‘social facts’ developed by Durkheim (1969), i.e. the view that the social reality exists on its own.

In contemporary criminology, causal theories are mainly developed from a scientific realist point of view. Realism is of interest because it may bridge a gap between paradigms that are conflicting in their dogmatic application. Realism refers in this context to the idea that society

exists independent of scientists and the theories that scientists produce<sup>1</sup>. From this angle, realism has its roots in positivism. Realism, although influenced by positivism, does not disapprove of constructivism. Realism explicitly recognises the Thomas' theorem ("If men define situations as real, they are real in their consequences"- this is the basic idea of symbolic interactionism), and even considers Thomas' theorem as one major explanation of why objective conditions are perceived differently. One important task of science is to discover how the world functions by looking for explanations and searching for causes. Therefore we strongly prefer a realist approach to crime when the main aim is to discover the causes of crime and how people get involved in moral rule breaking. To us it seems that a non-constructivist approach to social construction is the most fruitful way to study the causes of crime at various levels of aggregation, i.e. from Durkheim's social facts to offending by individual members of a society. This approach is useful because crime does not exclusively exist in the minds of criminologists, but also happens in the real world outside. In the real world, crime leads to the suffering of victims, offenders and society.

From a realist approach, causes and explanations are not invented but discovered through induction and deduction (Bunge, 2006a). A realist approach will therefore never strive to produce grand theories nor can it be seen as equivalent of 'blind empiricism': the eclectic and arbitrary variables-based<sup>2</sup> approach to crime. One might wonder why Durkheim is considered so important to analytical criminology as Durkheim's view may seem to contrast with Coleman's methodological individualism. Indeed, Durkheim exclusively focused on the analysis of social facts as rates of behaviour, and by doing so he developed the foundations for macro-level theory. He also emphasised that 'social facts' have a much more specific meaning than the phenomena that occur in society, and have some general societal importance. Furthermore he underscored that sociology should be organised around the kind of facts that share special characteristics. Durkheim named three characteristics: (1) objective<sup>3</sup>, (2) forced character<sup>4</sup>, and (3) specific<sup>5</sup>. According to Durkheim, crime should unequivocally be seen as a social fact, as a reality of its own or 'sui generis', that also exists outside the mind of the criminologist.

The founding fathers of sociology, such as Durkheim, Weber, Parsons, but also Marx, described the consequences of denying the existence of social facts independent of ourselves. Denying that social facts exist independent of ourselves is typical of constructivistic approaches of science, such as marxist criminology, radical criminology and abolitionism (Christie, 2004). Such extreme interpretations of constructivism, like the extreme interpretation of positivism, undermine the very essence of science. If every aspect of the social world around us were

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<sup>1</sup> Today it is quite generally accepted that the hypothesis, and thus the nature of the knowledge that has to be produced, determines whether one chooses an etiological or symbolic interactionist approach. Both points of view lead to a different kind of knowledge and the researcher needs to be explicit when making a choice.

<sup>2</sup> Variable-based criminology refers to the a-theoretical multiple factor approach or risk factor approach to crime and delinquency that has made the study of empirical correlates an end in itself.

<sup>3</sup> Durkheim (1969) talks about the 'extérieur', the exterior context. Durkheim discusses obligations that an individual does not create himself, but that he is subjected to, and thus exist outside of the individual.

<sup>4</sup> Durkheim also uses 'impérative et coercitive' to refer to sanctions. Social facts do have a coercive and ordering power, which means that social facts are imposed on individuals. The coercion is intensified when one tries to resist it.

<sup>5</sup> With this Durkheim means that they are determined by society. Durkheim introduced the group or groupings. It deals with facts that are compelling (norms and opinions), that are specific to a group, a society. This is the origin of the term social facts.

interpreted as social constructions, then science would be of no use, as it would be impossible to learn something about the world and how things work (Edling, 2007). At best we would learn how a social construction is constructed. Scientific debate would no longer be possible because every argument about how social reality functions would be equally valid, there would be no standard (social reality itself) against which to measure scientific thoughts. The concern that criminology from an extreme social constructivist approach would undermine its own legitimacy, is the main argument for preferring a realist approach to crime, at least when the key objective is to get to advanced theory-based knowledge. Such an approach has both feet in empirical reality, and has the potential to effectively deal with the prevention of crime.

As Wikström (2004) stated, it is probably more fruitful to study crime causation as a separate research question (and thus to answer the question of why some people commit crimes knowing that punishment will follow) without simultaneously having to explain why some behaviour has been outlawed while other behaviour has not<sup>6</sup>. By doing so, theories about crime remain embedded within social reality and are not at risk of becoming grand theories that can never be adequately tested and therefore remain middle-range theories. In short, we are convinced that the further development of middle-range theories from a scientific realist point of view provides the key to developing theories of crime causation. A scientific realist approach to crime means that attention is paid to mechanisms and processes leading to crime under certain societal conditions. Analytical criminology fits the theoretical framework of scientific realism and is put forward in this contribution as a useful tool in the study of causes of crime as action at different levels of aggregation<sup>7</sup>.

### **10.3 Action-oriented explanations and the rational choice perspective**

*'Humans have agency, that is, a capability to act upon their environment in a purposeful way. Action, the expression of agency, may be defined as behaviour (acts) performed under the persons' guidance. A theory of action specifies what moves people to act. (Wikström, 2004)'*

Wikström (2004) argues that criminology knows little about causes of crime, in contrast with the huge number of crime correlates. This contrast is due to the lack of general theories about action in criminology. Within other fields, like sociology and economy, theories of action do exist. In adapting a general framework of action-oriented theory, Wikström argues that behaviour of individuals should be seen as a consequence of the behavioural options that actors have and the actual choices that they make. Those behavioural options are not chosen in a vacuum, they are a consequence of the interaction between moral attitudes and the social milieus to which actors belong. The concept of choice refers to the judgment of situations (Wikström, 2004). Individual characteristics and characteristics of social settings can act as direct or indirect causes of actions that are undertaken, but only if they influence the behavioural

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<sup>6</sup> It is not per definition necessary to answer the question 'Why is it forbidden to smoke in a public space?', if one wants to answer the question 'Why do some individuals knowingly break that law?' This does not mean that answering the question of criminalisation is less important, it is merely a different issue altogether.

<sup>7</sup> Typical of both early positivism and the empiricism of a variable driven criminology, is that no attention is paid to not-directly observable phenomena. Processes and mechanisms are not directly observable, but are a part of core business of science. Positivists only studied relationships between directly observable characteristics, and used a rather deterministic interpretation of causality. In addition, positivists, such as Tarde, Ferri, Lombroso unconditionally questioned rationalists' belief in the free will of individuals.

options of individuals, such as the perception of behavioural alternatives and processes of decision-making.

Action-oriented theories are often a priori classified as theories that belong to the rational choice perspective (Edling & Stern, 2003). The rational choice perspective serves only as a framework allowing for the study of action and is indeed useful because it can explain why people make particular choices from a broader variety of options (Kleemans, 1996; Verwee, 2007). It has been stated that one shortcoming of the rational choice perspective is that it is not possible to scientifically measure and study every behavioural option or choice that an individual considers (Elffers, 2005). But in a less rigorous interpretation of the rational choice perspective, as is familiar in the Scandinavian tradition (Edling & Stern, 2003), action is not merely seen as the outcome of pure rational choices, but additionally as a consequence of moral choices and values. From that point of view, attention is paid equally to the interaction between moral values, desires and opportunities that can be seen as important motives for the actions that actors bring about.

An analytical approach to crime can benefit from the rational choice approach by taking into account both rational and moral criteria in the analysis of acts of crime.

#### **10.4 Principles of an analytical criminological approach towards crime as action**

An analytical approach to criminology as a social science can provide researchers with more theoretically guided, and therefore more profound, insights into the social world around us. This approach is rooted in analytical sociological theorising. It explains complex social phenomena related to crime by carefully dissecting the problem and emphasising the components central to these phenomena. Following Edling & Stern (2003), analytical criminology emphasises the study of the social structures within which mechanisms operate to explain individual acts as outcomes of a series of social processes. An analytical criminological approach can use the analytical sociological approach to the study of social facts by focusing on following principles: explanation, dissection and abstraction, precision and clarity.

##### ***10.4.1 Explanation***

Explanations have an added value compared to descriptions because they answer why-questions. Analytical criminology brings the message that we need to bridge the gap between grand theories and the empiricism of a variables based criminology. A variables-based criminology runs the risk of getting bogged down in the swamp of the crime and crime-related correlates. A mere theoretical criminology pretends to tell the truth by 'story-telling'. Such 'truth' quickly becomes dogma because it is not subjected to empirical tests. Analytical criminology needs to explain the 'why's' criminal behaviour and events, and 'why' social factors differ in time and location, between societies and communities. Elster (1989) argued that the focus should be on explanation by mechanisms while Hedström & Swedberg (1998, p. 25) argued that a 'mechanism-based explanation seeks to provide a fine-grained as well as tight coupling between explanans (the explaining causally linked concept) and explanandum (that what has to be explained'. The tighter the link, the higher the level of clarity will be. This principle of tightness is very important. If we want to explain why and how it is that adolescents that have low self-control offend more frequently, then we have to explain this link. The explanation should be clarifying (see below: 'Precision and clarity as third principle'). One such

explanation could be that low self-control makes adolescents more vulnerable in criminogenic settings, particularly those adolescents that tolerate moral rule breaking.

#### ***10.4.2 Dissection and abstraction***

Dissection refers to the division of both social phenomena and their causes, and causal mechanisms that explain the outcome. These dissections should result in the reduction of social phenomena to their essence. The researcher should abstract this essential information about a social phenomenon theoretically. The dissection of a social phenomenon deals with the measurement of concepts, the translation of theoretical concepts into observable, operational elements. This empirical translation deserves more attention in contemporary criminology. Hedström (2005, p.3) argued that ‘dissection and abstraction are two aspects of the same activity, and they are core components of the analytical approach’. Through dissecting and abstracting, our understanding of processes becomes more transparent and clear. One example is the dissection of morality as a central concept of criminology. What does the theorist actually mean by that concept? Is morality a general concept referring to broader societal norms that are related to conforming behaviour, or is morality a multidimensional concept that refers to levels of tolerance of moral rule breaking or legal cynicism towards the moral principles stated in criminal law? A careful theoretical dissection of this concept is necessary to improve our insight into the phenomenon and its role in the explication of crime as action.

#### ***10.4.3 Precision and clarity***

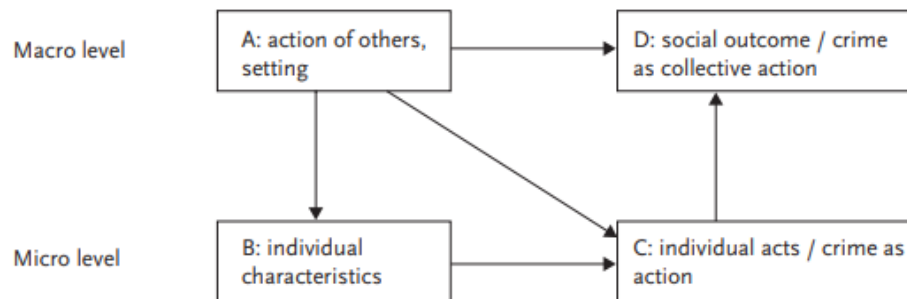
Precision and clarity should characterise the theory-driven hypotheses that are about to be tested by empirical findings. The creation of theory in criminology needs to demystify, not reify or add confusion. Thus, theoretical concepts need to be clearly interpretable, as do the relationships between concepts, and mechanisms that bring about effects. This distinction should already be present at the abstract and theoretical level, i.e. before starting an empirical analysis, but also at the empirical level. Precision and clarity therefore imply a transparent way of measuring concepts in empirical studies.

We are convinced that an analytical approach that takes into account these principles can improve our knowledge because it forces the theorist to carefully consider why the phenomenon under study should be studied, which conditions and mechanisms should be taken into account and why. The theorist should have a clear vision of the broader and more abstract concepts that deserve attention in an analysis. From this theoretical attention it follows that empirical tests of hypotheses can be interpreted more directly, so that results of analyses are less ambiguous and less ambivalent. By doing so, studies of crime and crime causation at multiple levels of aggregation become more fruitful and provide more profound insights for science and policy makers. Thus, there is less room for discussions about which theoretical concepts really do matter in the explanation of crime and which do not. The principles of analytical criminology could be considered to be acting against another principle of empirical research: the parsimony principle. Following the principle of parsimony, one would only focus on those concepts that increase theoretical knowledge. Scientists that follow the principle of parsimony use as few mechanisms as possible: only those mechanisms that ‘directly affect a dependent variable and increase the explained variance in a dependent variable’. We argue that parsimony may impede theoretical ideas of how concepts are related to each other in nomological networks. Indeed, the principle of parsimony may also encourage the criminologist to overlook mechanisms that do not directly operate and influence a dependent variable. We argue that, from a theoretical

point of view, it is just as important to gain insights into what is referred to as the ‘causes’ of ‘the causes of crime’, i.e. theoretical concepts that have influence on the direct causes of crime at several levels of analysis. An analytical approach to crime can therefore be best conducted from the principle of sequential integration. This means that attention is paid to the complex networks of relationships that link causes of crime.

### 10.5 Individual and collective action or the logic of an action oriented analytical criminology

Figure 18: Linking macro and micro-levels of crime



Source: Modification of Edling & Hedström (2005)

Macro-micro questions in criminology are a consequence of correlations between social facts, such as structural characteristics of ecological settings and crime, and offence rates of these settings as social outcomes. The arrow that goes from A to D in Figure 18 represents this macro-level relationship. If the correlation between A and D in Figure 18 is caused by underlying characteristics measured at a lower level, i.e. at the level of individual actors and their actions, the ecological correlation is spurious and the methodological individualism of Coleman is justified. This is also the case if there is a true contextual effect of macro-level characteristics on individual level outcomes (see the arrow from A to C). In that case causal mechanisms that explain individual differences and changes partially operate at the aggregate level. The contextual effect then is not caused by the differential composition of settings, and is partially responsible for social outcome D. The development of micro-level theories is then useful for explaining macro level phenomena. Methodological individualism serves as a means to critically reflect on the relationships between aggregate level observed relationships, also when people’s actions are partly influenced by context itself. In the field of criminology, attention to micro-macro problems has been growing as a consequence of increases in urban segregation because of poverty, and fear of the negative consequences of ghettos. The integration between micro level and macro level is called cross-level integration (Liska, Krohn & Messner, 1989). It has been acknowledged that the process of theoretically integrating different explanatory levels of offending is extremely complex. Scholars consider the issue of how and why individual characteristics and settings interact to be of major importance to improve our knowledge of juvenile offending. Baerveldt (1998) before us has argued that Coleman’s methodological individualism could be very useful in the refinement of macro-level theories. One of Baerveldt’s most important statements was that macro-level theories should be improved through theoretically dissection by detecting causal links between mechanisms at the macro- and micro level. However, he did not use the principle of mechanisms. From that point of view Baerveldt can be seen as an analytical criminologist ‘avant-la-lettre’. Scholars such as Sampson, Raudenbush and Earls (1997) consider aggregates to be contextual units that have



their own characteristics, and are more than the sum of their parts. Also, according to Bunge (2006b) the action of individuals as social actors cannot be understood without taking into account contexts, networks and even broader structures of individuals. On the contrary, these contexts should be studied together with the motives of individual actors. The criminologist that has an environmental view is wrong because he does not take individual characteristics into account, whereas the individualist is wrong for ignoring context i.e. the settings to which individuals are exposed. Individuals are connected with society and its structures. Following Baerveldt (1998), macro-level units that form ecological systems in society should be carefully chosen from a theoretical point of view.

It is an important theoretical task for analytical criminology to state why a macro level unit plays an important theoretical role. Mario Bunge (2004, 2006b) can fill a theoretical gap in explaining why this is so. Bunge adheres to the systemic approach to crime in which one needs to make a distinction between:

- (1) the composition of the system, i.e. the collection of parts of the system;
- (2) the environment of the system or the collection of entities that are not a part of the system but do have an influence on parts of the system;
- (3) the structure of the system, i.e. the whole of structural relationships between the parts of which a system comprises<sup>8</sup>;
- (4) the mechanisms that function within a system.

As mechanisms play such an important role in evaluating theoretical improvement, we devote a separate paragraph to the study of mechanisms.

From a methodological point of view, using the logic of analytical criminology remains the only way to avoid aggregation bias. Aggregation bias is the consequence of wrong assumptions about the relationships between characteristics measured at different levels of analysis and this is the very essence of micro-macro debates in social sciences. Since Robinson (1950) it has been known that the paying exclusive attention to macro-level relationships and analyses is not without dangers. Robinson (1950) documented the well-known 'ecological fallacy' and in doing so he referred to the lifework of Shaw and McKay (1942), prominent scholars of ecological (or macro-level) criminology at the time.

The discussions of the time dealt with the effects of exposure to ecological settings on individuals. Shaw and McKay were convinced that exposure to ghettos had negative consequences for children and adolescents. That statement was derived from the ecological observation of a correlation between neighbourhood poverty and school truancy. The authors did not question if valid statements could be made about contextual influence of neighbourhood poverty on individual level outcomes observed among the neighbourhood residents, such as school truancy or offending. Some were convinced that effects of ecological settings could be put down to setting composition rather than setting characteristics, such poverty levels of the individual or household. Hauser (1970) warned against the contextual fallacy in the 1970s in his famous article 'context and consex: a cautionary tale'. The contextual fallacy is thus the incorrect interpretation of a contextual effect. This happens when one mistakes an individual

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<sup>8</sup> Structure should not be confused with the composition of the system. Structure refers to the relations between actors of a system.

level characteristic for its ecological counterpart. Valid causal judgments about characteristics of macro-level units first need to be identified at the theoretical level and must be empirically measured and exist independently of intervening mechanisms operating at the individual level. We are convinced that this can only be achieved by taking Coleman's methodological individualism seriously as an anchor point for analytical criminology.

### **10.6 The clarifying role of mechanisms in an action-oriented analytical criminology**

Wikström (2004; 2007) has made strong arguments to support the notion that the problem of causation has not always been well treated in criminological research. The etiology of crime does not understand very well the causal mechanisms and processes that are at work when individual differences and changes in crime are to be explained. That is why there are too many correlates of crime (e.g. biological, psychological and sociological), which merely obscure a causal interpretation (Farrington, 2002). As a consequence some scholars have stated that nothing really matters while others have stated that everything matters in the explanation of crime (Wikström, 2004). This situation does not help theorists, nor does it help practitioners such as probation officers and social workers in their attempts to learn about crime causation.

The basic philosophy behind a mechanism-based explanation is that social phenomena are explained by those mechanisms that bring about differences and changes in a condition (the explanandum or the dependent variable in a study). The Norwegian sociologist Jon Elster (1989, p. 3-4) argues that the explanation of an event or act deals with plausible reasons why the event or the act took place.

The attention to mechanisms is not new to our proposed style of theorising and is rooted in the ideas and theories of very influential sociologists such as Robert K. Merton (°1910-2003) and Emile Durkheim (°1858-1917). To this day we can learn important lessons from these founding fathers of sociology, as Edling & Hedström (2005) stated earlier, and these lessons go beyond historical issues. These early theorists were not always theoretically specific and they did not have the most sophisticated tools of analysis to test their hypotheses. Yet early theorists deserve respect for their approach and vision on science. Emile Durkheim is, from a historical point of view, the analytical sociologist *avant-la-lettre* because he was interested in social mechanisms that operated at the societal level. Durkheim (1951) described mechanisms of self-regulation in his analysis of the balance between individual and groups, and the effects of this balance on the suicide rate in his classic book *Le Suicide: étude de sociologie*. Durkheim never used the word 'social mechanism'. The sociological contribution of Robert K. Merton (1968) was a milestone when it comes to mechanism-based explanations. Merton strongly emphasised the fact that theory and empirical research need to be very closely related in his groundbreaking work *Social Theory And Social Structure*. Merton talked about social mechanisms as fundamentals of sociological middle-range theories and defined the word 'mechanism': as 'social processes having designated consequences for designated parts of the social structure (1968, p. 43)'. In contemporary sociology the concept of 'social mechanism' is prominent in the writings of Mario Bunge (2006a), James Coleman (1986) and Peter Hedström (2005). In the field of criminology Robert Agnew (1993), Per-Olof Wikström (2004), Robert Sampson and Stephen Raudenbush (1999) can be seen as key authors that favour mechanism-based explanations. According to Agnew (1993), a mechanism explains how something works, and it therefore gives insight into the relationship between social structure and crime. Criminologists see mechanisms as intermediate variables that are necessary to make an observed correlation

between characteristics plausible. Blalock (1964) described this relationship as the indirect effect. There is however one danger that one should be aware of when following this interpretation. One cannot consider a variable that represents a mediator of another variable to be equal to the underlying mechanisms behind a known association, without having given serious thought to cause-and-effect relationships. One clear example of how cause-and-effect relationships have been given serious attention from a theoretical point of view can be found in Wikström and Sampson (2003).

Having read Bunge (2006b), Hedström (2005), Hedström & Swedberg (1998), Elster (1989) and Wikström (2007) we are forced to conclude that no consensus exists about precise definitions of mechanisms. Both philosophers and social scientists give plenty of definitions. Table 37 illustrates a selective anthology of interpretations of the concept of mechanism by leading sociologists / criminologists.

Although these definitions differ from each other they do share one common theme that we identify as a major task of an analytical criminology. These definitions clearly emphasise the need to explain observed regularities and they do that by pointing to how they happen in detail. Mechanism is often used as a synonym for process. The latter term refers actually more to the dynamic character or time-aspect that is so typical of ‘to bring about’ in its causal meaning. Hence, the study of mechanisms adds theoretical value to the quantitative explanatory research into individual differences and changes in the actions of actors. We clarify our statement by looking at the objectives of research into crime causation. Research into crime causation often tries to make statistical inferences from observed phenomena in samples. Statistical inference can never be seen as an equivalent for causal inference. Both forms of inference do have one common denominator. Both try to use localised information to draw conclusions for more general phenomena (Hedström, 2008). Statistical inference deals with the chance that an effect parameter in a population does not differ from a ‘regression coefficient’ as sample statistic.

**Table 37:** A selection of definitions of the concept ‘mechanism’

Author	Definition	Source
Merton	Social processes having designated consequences for designated parts of the social structure	Merton, 1968
Bunge	A mechanism is a process in a definite system that is able to bring about or to prevent an effect in that system	Bunge, 2001, 2006b
Elster	Mechanisms are frequently occurring and easily recognisable causal patterns that are brought about under certain conditions	Elster, 1989
Hedström and Swedberg	A social mechanism is a precise and abstract action-based mechanism that shows how the occurrence of an event or act can explain that same event or act.	Hedström and Swedberg, 1998
Wikström	A mechanism is the process that connects cause and effect.	Wikström, 2007; Wikström and Sampson, 2003

Source: modified from Hedström (2008)

From a pure analytical criminological perspective the aim is to go beyond the original sample. What we ultimately intend is the generalisation of the process that brought about an act. The focus is not on the relationship between variables, but on actors, and their acts as outcome of diverse processes. Of course, we need to measure acts as variables. The issue at stake here is that causality does not operate at the variable level. It is not because causal relationships are so hard to detect using quantitative analysis (often even further restricted by the non-experimental design and cross-sectional character of most studies) that such studies are restricted by this. Each study has its own restrictions. It is important to realise that correlations never prove causality convincingly. The opposite is true: causality implies the existence of empirical correlations. Therefore it is possible to eliminate some statistical models that do not fit the observed data (Blalock, 1964). For that reason, working with path diagrams that identify relationships is imperative for analytical criminologists. By doing so, one clarifies what is to be tested and one is obliged to provide a clear and well-motivated analytical argumentation of all causal arrows, well-founded in its thinking about cause and effect. In variables-driven criminology, the theoretical arguments as to why some variables are considered as causes of an outcome in a quantitative analysis are lacking. Variables-driven criminology simply includes variables in statistical models without carefully considering why they should even matter. As a consequence, this type of research risks overcontrolling for the effects of other 'variables', and therefore makes it difficult to assess influences of theoretically relevant mechanisms. The explanations of why, and under which conditions, mechanisms bring about an effect are crucial for both theory and policy. One other flaw in many variables-driven studies is that background variables, that can never be interpreted as causal, are entered into equations for no good reason. Gender, immigrant background and family structure can never be seen as the foreground of actions undertaken by individuals. At best, they are entered into an equation because the actual mechanism at work, which is associated with the background characteristic and the outcome variable, is not measured at all. Thus, our style of theorising with its focus on mechanisms helps to theoretically explain why actors do what they do.

### **10.7 Methodological consequences of an analytical approach**

An analytical approach to crime as action that takes into account the macro-micro context of crime as a social phenomenon is essentially quantitative. One possible explanation for this is that it is a consequence of Coleman's methodological individualism itself. Effect parameters in quantitative analyses can easily be interpreted using advanced multilevel models that are statistically able to make a clear and precise distinction between the aggregate level, contextual effect and the macro level compositional effect<sup>9</sup>. Advanced theories require advanced methodological tools. The study of crime as action requires that one starts from plausible cause and effect relationships and that one needs to clearly conceptualise and create operational variables, and develop hypotheses that explain how these relationships are connected to each other. Methodological innovations and theoretical innovations should go together. It cannot be denied that the increasing popularity of multilevel modelling has awoken the theoretical interest of some criminologists, just as method problems have stimulated methodologists to find new solutions for old theoretical problems. An analytical approach to crime as acts cannot degenerate into a merely empirical matter, where the quality of empirical data used for complex analysis becomes of minor importance. That would be the opposite of what is intended, namely

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<sup>9</sup> It is not our intention to suggest that qualitative analysis cannot be used for the macro-micro level discussion.

theoretical progression. It will not do to collect data with a sledgehammer and consequently analyse it with the finest tools of the trade. Analytical criminology requires a balance between both.

### **10.8 Discussion and conclusion**

To stimulate and improve the further development of advanced theories of crime causation and research on effects of individual and ecological level mechanisms, we have put forward an analytical approach to crime in this contribution. We have named this approach 'analytical criminology'. This approach is rooted in the current field of analytical sociology. The tradition itself is not new but can be seen as an elaboration of the visions of founding fathers of sociology such as Durkheim and Merton. In this tradition, crime is seen as the result of the action of individuals, as is any behaviour. The study of causes, and not just correlates of crime as action, is prioritised within the analytical approach. The theoretical explanation needs to make a systematic study of the explanandum, i.e. that what is to be explained, and the explanans, i.e. the explaining concept. Thereby theoretical concepts should be stated clearly and precisely. We need to carefully study the mechanisms that are connecting causes and effects. This approach to the study of crime also has roots in classic etiology of crime although it differs significantly from that classic approach. The early positivist approach only took directly observable phenomena into account and had a deterministic connotation. Indeed, this is a consequence of the inheritance of classical positivism.

From this contribution it should be clear that narrow-mindedness from both a positivist and constructivist point of view does not provide us with a key to the scientific study of crime causation at several levels. Bunge's scientific realist approach was chosen because it allows for integrating aspects of both positivism and constructivism. From positivism Bunge argues that the social world can be studied independently of the scientist, and that the study of crime causation is perfectly possible without simultaneously paying attention to processes of criminalisation and decriminalisation. From constructivism, Bunge's realism recognises validity in Thomas' theorem by stating that objective conditions are perceived differentially. A realist approach takes science seriously and wants to increase theoretical knowledge of crime by recognising the parts of the aforementioned paradigms. Ultimately theoretical innovations should be the result. The ultimate goal of a realist approach is to increase our knowledge on social phenomena, which we argue should be the meaning of all science. The study of crime as acts at multiple levels of analysis is gradually being influenced by such a mechanism-based approach. This can be seen from the writings of internationally renowned scholars such as Robert Agnew (1995), Per-Olof Wikström (2004), Sampson and Raudenbush (1999). The study of social processes that connect causes and effects at different levels of analysis are being studied within this approach. These levels should be explicated and the theoretical relevant mechanisms that operate at each level should be clearly dissected and defined. The answer to these 'why' questions can best be given when four principles are taken into account: the principle of explanation, dissection, precision and clarity. These principles force criminologists to study a social phenomenon such as crime and give an explanation that goes beyond the relations between variables. We should keep in mind, also when it comes to crime prevention, that causality does not operate at the variable level. Advanced theoretical development in the study of crime causation is necessary if we want to improve our insight into the complexity of a social phenomenon such as crime, and if we want to develop prevention projects that achieve crime reduction.

One strong point of this approach is that it appeals for the study of crime as action at multiple levels of analysis from a theoretical point of view. To illustrate the existence of crime at multiple levels, Coleman's approach towards the study of micro-macro relations was given as example. Methodological individualism can help to determine the nature of observed correlations at multiple levels. This framework can easily be extended to the study of other topics in criminology while still using the same principles of analytical precision. Our message therefore is that analytical criminology should not be interpreted as one more paradigm, but as a highly useful method for both theorising and conducting research.