

The Economics of Crime and Criminal Law: An Antithesis to Sociological Theories ?

STEPHAN M. PANTHER¹,
Department. of Economics, University of Hamburg

Abstract:

The relationship between sociology and economics of crime has been dominated by mutual prejudice and misunderstanding. This paper tries to contribute to a change of this state of affairs by showing that, on the one hand, the economics of crime does not as a method imply politically conservative policy recommendations and, on the other hand, that insights of the sociology of crime may enrich the economic approach considerably. This is done via a brief survey of the economics of enforcement, the literature on the relation of income distribution and unemployment on crime, and the literature relating sociological theories of crime to methodological individualism.

Keywords: optimal sanctions, deterrence, income distribution and crime, unemployment and crime, anomie, differential association, criminal subculture, labeling, non-market interaction, social norms

"...criminal behavior becomes part of a much more general theory and does not require ad hoc concepts of differential association, anomie, and the like, ..." (Becker, 1968, p. 176)

"Overall, the efforts of the neoclassical school demonstrate that economic insights are only of limited value in criminology." (Schneider, 1987, p. 369, translation by the author)

"... there is a number of theoretical ideas in the works on the sociology of deviant behaviour that have up till now not been employed in the field of economics, but that could contribute towards a better understanding of deviant behaviour." (Opp, 1989, p. 426)

1. Introduction

The statement cited above from Becker's pioneering 1968 paper on the economic analysis of criminal behaviour reveals the anti-sociological flavour which has characterised the field ever since: Sociological theories are done away with in a subclause and labelled "ad hoc", one of the most severe verdicts at the disposal of an economic theorist. Schneider's statement, referring to the economic approach as "neoclassical school" and summing up a short review in one of the established German texts on criminology, shows that it is not difficult to find similar statements from the

¹I would like to thank the organisers of the Symposium on "Sociology of Law versus Law and Economics: A Different Paradigm?" held in Ghent on the 23rd of March 1995 for the chance to express my views on the economic analysis of crime and criminal law and its relationship to sociological theories as well as the participants and especially Jürgen Backhaus for discussing them.

sociological side. These two statements can however hardly be seen as the outgrowth of a serious and fruitful debate between the two approaches. Rather, proponents of the two have tended to ignore each other scientifically, while fighting over resources and influence on decision makers. This struggle tended to have ideological overtones, proponents of the economic approach generally being associated with more conservative political positions than their sociological counterparts.

This paper is an attempt to vindicate a third position, which is close to Opp's statement above. By arguing that the simple policy conclusions associated with the early economic models cannot be sustained in more sophisticated ones, even if one follows the present tendency to reduce the economic approach to the economics of enforcement, it tries to show that there is nothing inherently conservative in the economic methodology. Besides pure exposition, this is the purpose of section two. Furthermore, section three shows that topics like the influence of unemployment and inequality of income on crime, central in the classic criminological analysis of economic influences on crime, but underemphasised in current research, can be meaningfully dealt with in the framework of the economic approach, enriching the menu of possible public policies. It is then argued that a synthesis of some substantive ideas contained in the various sociologies of crime and the economic approach provides an enriched body of theory. This is undertaken in section four by way of a systematic survey of the few attempts to integrate sociological and economic approaches to crime.

2. The Economic Approach to Crime and Criminal Law

2.1. Methodology

The economic approach to crime and criminal law employs the economic model of human action to criminal action²: Criminal as well as law enforcing man/woman is economic man/woman.³ In a nutshell, this means that actors are seen as striving to reach their aims, described by their preferences, to the highest extent possible. In doing so, they are constrained by the availability of resources to them, including time and talent. Preferences are seen to be consistent and constant over time. While it might be convenient for purposes of empirical falsifiability, economists argue, to concentrate on material wants, nothing in this approach prevents the inclusion of non-material objectives. The rationality ascribed to actors lies in the strive to fulfil their aims as much as possible. It is not a characteristic of their wants.

In economics, however, there is a prejudice in favour of explanations by constraints rather than by preferences. Applying this view to crime implies that the attempt to explain a rise in the crime rate by claiming that more people have acquired criminal preferences is not regarded as very helpful. This also means that economic analysis does not need to assume a priori pathological human beings with a criminal destiny. Everybody may become a criminal, if placed in the appropriate situation: It's opportunity which makes the thief.⁴ The economic approach thus remains close to the so called

²No distinction between action and behaviour is made in the following.

³See e.g. Opp (1989), pp.407 for a brief introduction in the context of criminal law. As a sociologist, Opp is more confident in the possibility to measure non-material objectives than economists usually are.

⁴See e.g. Becker (1968) p. 176 for an explicit statement of this view.

classical school of criminology inspired by the philosophy of the enlightenment, especially to Beccaria and J. Bentham.⁵

Few researchers would claim that the concept of human action just sketched out is descriptively accurate, neither concerning the subject matter of economic theory proper and possibly less so when applied to criminal behaviour.⁶ Much behaviour undoubtedly is habitual, guided by rules of thumb, since information acquisition and processing (mind as a scarce resource) is costly, emotionally motivated or impulsive. However, one can argue that people reason out major decisions as well as they can and revise their rules of thumb when these do lead to undesired results too frequently. Even so called "crimes of passion" may be influenced by calculative deliberations if they do not occur out of the blue, but have an escalating history leading up to them in the course of which an actor can take actions making such a crime less likely to occur. More generally, it is argued that whatever guides the actual behaviour of people, only those behavioural routines will survive in the long run which come close to maximising the gains of an actor in a given situation. Building on arguments like these, proponents of the rational actor hypotheses maintain that the consequences of a change in policy may still be best predicted by using the rational actor methodology. Average aggregate behaviour changes *as if* people were rational.⁷

When applied in a normative fashion, the economic analysis of crime and criminal law uses welfare economic analysis to judge the desirability of a policy design. The basic value judgement contained therein is that the welfare of society only depends on the well-being of the individuals of that society as measured by the extent to which their aims have been fulfilled. Usually, however, compensation criteria are used to evaluate policy. Here, in addition, the distribution of income in a given society is not taken into account. Basically a situation, *A*, is judged to be preferable to another, *B*, if the sum of the additional benefits a change from *B* to *A* creates, using a money metric, is larger than the loss of benefits effected by that change. Actual compensation between winners and losers does not have to take place. This is seen as the task of a general redistributive policy.

2.2. Economics of Crime and Criminal Law as Economics of Enforcement

The economic analysis of crime and criminal law is, to use the criminological term, essentially etiological, i.e. it takes the norms to be protected by law as given and looks at the causal determinants of criminal behaviour, the body of work providing some criteria as to when enforcement has to resort to criminal sanctions against merely using civil law notwithstanding. The norms to be protected are essentially those guaranteeing the functioning of a market society, i.e. private property rights including classic liberal human rights like the right not to be subjected to bodily harm, freedom of movement, freedom of choice of occupation etc.. The reason for this is simple. Economic analysis provides several arguments in favour of the basic efficiency of a society based on free

⁵Richard Posner sees the work of these two authors as early examples of the economic analysis of crime and criminal law. See Posner (1992), p. 22 fn.2.

⁶See Cooter and Ulen (1988), pp. 521-523 for an accessible discussion related to this paragraph.

⁷In recent years work which explicitly models imperfectly rational behaviour has become increasingly popular. Transaction cost economics is a relatively "soft" proponent of this trend, evolutionary game theory a "hard" one. The rise of experimental economics is a correlate on the empirical side.

exchange. Although public goods, external effects, asymmetric information and transaction costs make for a more complex world, it remains unclear how this should affect the selection of norms to be protected by criminal sanctions.

Taking thus criminal norms as given, a basic, but fairly general version of the fundamental situation envisaged by economic analysis is the following. An actor is facing the choice between an illegal activity, generating income y , and a legal activity, generating income z . He has to decide where to employ his resources, including time and effort.⁸ Personal ability and experience influences the return to both kinds of activity. General economic conditions like the likelihood of finding legal jobs, $1-u$, wages, etc. influence the profitability of the legal activity. The expected income from the illegal activity is decisively determined by the probability of apprehension, p , and by the severity of the ensuing sanction, s . Besides income, the utility of the actor may depend on other factors. Thus, both activities may be intrinsically rewarding or unrewarding for the actor. Joy or pride of work, disutility of effort, any moral qualms about being engaged in an unlawful activity etc. may be relevant. Let the intrinsically negative variables v and w sum up these effects for the legal and the illegal activity respectively. Summing up,

$$(1) \quad EU = EU(y, p, s, v, z, u, w)$$

represents the objective function of the actor under consideration in a general manner, where EU denotes expected utility. In this simple version, the intricacies of the legal process are obviously left out of the picture.

The economic approach to crime and criminal law has focused to a very large extent on the factors influencing the returns to illegal activities. It is thus by and large an economic analysis of enforcement. In the following, I will briefly discuss two themes which have been central and controversial in the discussion ever since Becker (1968). The first concerns the existence of deterrence by sanctions, the second revolves around the policy conclusion that sanctions should be extreme.

2.2.1. Deterrence?

It is probably fair to say that the majority of practitioners of economic analysis believe that an increase in either the severity or probability of sanctions will lead to a decrease in criminal offences, i.e. they believe in the existence of deterrence by sanctions. A prototypical specification of equation (1) generating this result is

$$(2) \quad EU = (1-p)y + p(y-s) - v = y - ps - v.$$

Let us assume that in a large population all actors can obtain the same criminal income y and have the same reservation utility from the legal source, 0, but differ in the disutility of criminal activity, v . An actor will then engage in the criminal activity as long as $b \equiv y - v \geq ps$, i.e. as long the net benefit from the crime, b , defined as the difference between criminal income, y , and non-monetary disutility, v , exceeds or equals expected sanctions. Since v is varying in the population, so is the net benefit b . By increasing ps ,

⁸Alternatively, one could make the income derived from both activities a continuous function of the resources expended on each of them. This is e.g. implicitly done in Becker (1968).

at least those actors, who before the increase were just indifferent between the two activities, will be deterred from the criminal activity and choose the legal activity instead.

However, this unambiguous result is not robust if the model is made more general. Note that an increase in expected punishment can be interpreted as a decrease in the expected "wage" for the labour expended in the criminal activity. It will come as no surprise to economists that using a model of crime closer to the simple model of household choice of labour supply is one straightforward way to get ambiguous results. While we would still expect that decreasing the expected "wage" via increasing expected punishment in such a model will have an unambiguous substitution effect away from crime, the total effect will be theoretically undetermined due to the a priori unsigned income effect. Block and Heineke (1975) have provided such an analysis. Their model differs from the above in two major aspects. First, the actor can choose freely to allocate his time to either activity, the income in each being a function of the time spent on it, and second, the utility of the actor depends directly on the time spent in the legal and the illegal activity as well as on the end of period wealth.⁹

Cameron (1988) lists a number of other theoretical reasons for an ambiguous effect of higher expected sanctions. Among the more interesting ones are:

- Positive correlations between legal and illegal income if legal employment is providing information or other useful services for criminal activities.
- Spillover effects between regions, time periods and offences. Higher deterrence efforts directed at one region, time or offence will lead to crime-export to other regions, times or offences, possibly resulting in an increase of the aggregate crime rate.
- Perverse "industry supply" effects of incapacitation via imprisonment in the case of organised crime. While incapacitation via imprisonment has the direct effect of lowering the supply of potential offenders, in the case of organised crime it also directly benefits potentially or actually competing "crime firms". This might free enough resources in the new or remaining organisations from entry or rival deterring activities that the overall crime rate increases.

Accepting the economic account of criminal activity hence does not lead to an unconditional acceptance of the deterrence hypothesis. Empirical studies do not seem to be able to resolve the matter conclusively either. Cooter and Ulen (1988, pp. 523-528) conclude their survey of the literature by affirming the deterrence hypothesis while conceding that the evidence is spread unevenly between different types of crime and differs for the probability of apprehension and the severity of sanctions. Cameron (1988), who discusses statistical problems in detail, ends on a much more sceptical note.

2.2.2. *Extreme Sanctions ?*

The policy conclusion that sanctions should be as extreme as possible, even for minor offences, is a startling result of the simple model of crime. It was implied by the model of Becker (1968), though it was driven to its logical conclusion only by later

⁹See also Heineke (1978) for a detailed discussion of techniques for modelling criminal behaviour and their consequences for comparative static results.

contributions.¹⁰ Looking at the condition for deterring an actor from crime derived from equation (2), $b \equiv y - v \geq ps$, it can first be noted that only expected sanctions, ps , are relevant for deterrence. How should the optimal mix between probability of conviction as a function of expenditure on police, courts etc. on the one hand and the severity of sanctions on the other hand look like? As long as punishment is cheaper than efforts to get hold of criminal offenders from a social point of view, it should include the severest sanction possible and a low probability of apprehension. The result is especially relevant for fines, which are the cheapest sanction of all, effectively constituting a pure transfer not causing any social cost in a risk-neutral world. This "expropriation of life-time wealth for littering"¹¹ result is startling and has produced a stream of contributions providing reasons for a modification of this result.

The most far reaching efficiency explanation for sanctions that "fit the crime" has been provided by Stigler (1970) originally. There is more than one kind of criminal activity, and these differ by their severity, i.e. the social damage they cause. If the severest sanction is already employed for the least serious offence, more severe offences are no longer deterred at the margin, i.e. no incentive is given not to speed grossly once you speed, to steal larger and larger amounts, to kill while robbing etc. ¹² Posner (see e.g. 1992, p. 226) counters this argument by pointing out that there is an interaction between total and marginal deterrence. Punishing robbery as severely as robbery-murder will increase the proportion of robbery-murders. It might however decrease the overall number of robberies so much that the total number of murders decreases. Furthermore, a marginal deterrence effect may be reached by varying the probability of apprehension rather than the severity of sanctions. Shavell (1991) recently has provided a rigorous formal analysis of the argument. For a simplified exposition, suppose that expected utility of an actor committing the crime is again described by equation (2)

$$(2) \quad EU = y - ps - v = b - ps,$$

and let the net benefit b again be varying inside the population. Let h denote the harm to society caused by a particular offence. For simplicity the distribution of b is identical for each h . Suppose furthermore that all enforcement effort is general, i.e. the probability of apprehension is the same for all kinds of offences. Whatever level of p may be optimal, optimal deterrence is reached when $ps = h$. If this policy is implemented, only those actors choose to engage in the illegal activity whose benefit from it exceeds the harm caused by the activity. However $ps = h$ implies $s = h/p$ which in turn implies a penalty rising with the severity of the offence since p does not vary between offences. Shavell's analysis allows part of the enforcement effort to be specific, i.e. only serving to increase the probability of apprehension for a particular offence, and includes monetary as well

¹⁰See e.g. Shavell (1991, p. 1089) for further references.

¹¹The result has been called the "death-penalty for littering result". This is not adequate. There are a lot reasons to assume that the death penalty is socially not a "cheap" penalty. The immense and possibly decisive "moral costs" of capital punishment aside, it causes maximal disutility to the offender, whose well-being, as a member of society like any other, has to be included in the well-being of society. More profane, the death penalty may cause great monetary costs. Cooter and Ulen (1988, pp. 566-567) name the jury selection process, the trial itself and post trial costs like security and supervision for prisoners on death row as factors to be taken into account.

¹²A similar argument may be constructed if the possibility of repeat offenders is considered and repeated offending signals a higher propensity to commit an offence. See Polinski and Rubinfeld (1991).

as non-monetary sanctions. As long as at least part of the enforcement effort is general sanctions increasing with the severity of the offence are unequivocally optimal.

Other efficiency justifications for fines smaller than total wealth are:

- Risk aversion of offenders, making fines socially costly when it is not optimal to deter all crime (Polinsky and Shavell, 1979).
- Differences of wealth between individuals. If you increase a fine equal to or larger than the wealth of the poorest member of society and simultaneously decrease the probability of apprehension, expected sanctions no longer remain constant but will decrease for poor members of society (Polinsky and Shavell, 1991).
- The possibility of legal error. Activities prone to innocent apprehension and conviction will be reduced too much (Posner , 1992, p. 224).

2.2.3. *Concluding Remarks*

There is a tendency for the simple answers to the policy problems in the area of crime and criminal law provided by the simple early models of the economic approach, not to hold generally in later, more sophisticated models. This should make the economic approach less provocative on the one hand and show its ability to provide more differentiated analyses on the other. Quite a few issues not touched upon so far have been dealt with. A lot has been written on the choice between monetary and non monetary sanctions, including analyses of the incapacitation effect of imprisonment (see e.g. Polinsky and Shavell, 1984, Shavell 1987), the sanctioning of repeat offenders has been looked at (Polinsky and Rubinfeld 1991), a few analyses of criminal procedure exist (see e.g. Reinganum, 1988), etc.. It is, however, not the purpose of this paper to summarise all of this literature. Rather, it seems appropriate at this stage to discuss a peculiar lacunae in the economic approach bringing us one step closer to a discussion of the sociological theories of crime and criminal law.

3. **The Other Side: Access to and Rewards of Legitimate Activities**

If we look again at the simple decision problem originally sketched out in section 2.2 and summarised by equation (1), it should become immediately clear that we have only been concerned with one side of the problem so far. The literature following Becker (1968) has emphasised almost exclusively the role of enforcement measures as an instrument to decrease the return to illegal activities. It has paid conspicuously little attention to policies aiming at reducing the incidence of crime by increasing the return to legal activities. There exist, to the knowledge of this author, only two formal analyses of the effect of income redistribution on crime (Eaton and White 1991, Benoît and Osborne 1995) and the leading two textbooks in law and economics, Cooter and Ulen (1988) and Posner (1992) spend only one or two pages at discussing crime prevention by reducing unemployment or raising the income of the poor.¹³ Nevertheless, such considerations are well within the range of the economic approach. They also have at least as long a history as the thinking about deterrence has, dating back at least to St.Paul.¹⁴

¹³See Cooter and Ulen (1988), p. 528-530, Posner (1992), p. 223.

¹⁴See Taylor (1994) for an account of the history and present research on these "political economy" issues in criminology.

The relevant arguments can be illustrated by a simple specification of the part of equation (1) relating to legal income. Suppose that the expected utility from the criminal activity as described by (2), $b-ps$, is given and constant for all actors in society. Let

$$(3) \quad (1-u)(z-w) + u\alpha z$$

describe the expected utility from the legal activity. The likelihood of not finding a job is taken to be equal to the unemployment rate and denoted by u . Income in case of unemployment is denoted by αz . It is assumed that $z-w > \alpha z$: Individuals do not prefer unemployment to work. For simplicity assume furthermore that w is constant in the population and only the income from the legal activity, z , varies.¹⁵ Note that using (3) to describe the return to legal activities implies that unemployed actors cannot commit crimes, an assumption to be discussed again later on. Whenever the expression given in (3) exceeds $b-ps$, an actor will remain in the legal activity. This implies the existence of a critical income

$$\tilde{z} = \frac{b-ps + (1-u)w}{1-u(1-\alpha)}.$$

All actors with potential legal incomes above \tilde{z} will engage in the legal activity, all those with potential incomes below \tilde{z} will choose the illegal activity.

Note first that decreasing unemployment will draw some actors just or almost indifferent between the two kinds of activities away from illegal activities just as any effort at deterrence does. Note furthermore that the same effect can be achieved by increasing the income of those whose legal income opportunities are poor and who therefore choose to engage in the illegal activity. Especially the latter argument favours income redistribution as an adequate crime preventing policy. Both arguments hold if an unemployed actor may engage in the illegal activity. Formally, the second term in (3) would vanish and αz had to be counted as additional income in (2), without any change in the validity of the arguments.

Now, the case for inequality of income distribution and unemployment as crime increasing factors is neither theoretically nor empirically clear-cut. Unemployment might not be causal for an increase in crime rates, as the argument just presented assumes, but crime and unemployment may be codetermined by the same factor, like poor educational achievement or an increase in the attractiveness of crime for other reasons, leading to potential criminals dropping out of the active workforce and possibly being recorded as unemployed. However, both of these arguments immediately point out social policies which may be appropriate reactions if the association between unemployment and crime is explained by them, subsidies to education in the first and subsidies to wage-earners in the second case. Wage subsidies have a double effect here. They create a financial incentive to prefer legal income creating activities on the one hand and an "incapacitation" effect on the other. Somebody who is at work is a lot less likely to commit a crime at the same time.

¹⁵It could be assumed that both b and w vary independently of z inside the population without any qualitative change in the argument.

Empirical work again has not been conclusive. While Cooter and Ulen (1988) conclude their brief survey of relevant studies on a sceptical note, Tarling (1982) in an extensive survey of empirical studies feels confident to conclude, that a positive correlation between the crime rate and the unemployment rate exists. Two recent studies for Scotland 1974-1988 and the US 1970-1983, explicitly trying to uncover a causal connection provide strong evidence that such a connection exists.¹⁶

Redistributing income as a crime preventing policy might not work since the taxes on the well-to-do this implies may lead those to commit more crimes. Posner furthermore argues, that concentrated wealth may be less costly to protect than less concentrated. Note, however, that the first argument does not hold in the model sketched above, since rich actors would only be drawn into crime if their income would be reduced down to the critical level \tilde{z} . A similar argument applies if one uses the model introduced by Polinsky and Shavell (1989) to look at optimal enforcement policies in the case of actors with varying wealth for an analysis of the effect of income redistribution. Their analysis implies an overdeterrence of high income individuals too. Taxing high-income actors will not make them commit a criminal offence.

Empirical work by economists on the connection between income distribution and crime rates seems to be even more rare than that between unemployment and crime rates. The four recent studies this author has been able to locate, all favour the positive association between crime and inequality.¹⁷

Among these studies are two, Danziger and Wheeler (1975) and Stevans (1988), which take us beyond the connection between unequal opportunities for acquiring income and the decision to commit a criminal offence. They do so by modelling actors who care about relative income differentials, i.e. about economic status. No longer are actors seen as independent and interacting only through "the market" for legal and illegal activities, but rather as being interdependent in other ways too. This introduces a genuinely sociological element and leads us to sociological accounts of crime and criminal law and their relationship with the economic account.

4. Towards an Integration of Economics and Sociology of Crime?

Frey and Opp (1979), in one of the pioneering attempts to bridge the gap between sociology and economics of crime, described the relationship between the two approaches as one of mutual prejudice and misunderstanding, and it is probably fair to say that this description is still adequate today. Looking at the relationship of the two "mother-disciplines", this is no accident. In the 19th century, while sociology was not yet an established academic discipline, most classical economists like Smith, Malthus or Mill as well as the members of the historical school were ready to look outside their own field narrowly defined in search for relevant explanations. However, ever since in country after country the deductive approach had won the day in the methodological controversies in economics, economics and sociology have drifted further and further apart, culminating in a state of mutual ignorance and prejudice. Of course, there had been tensions before. Those trying to find a place for sociology in academia like Auguste Comte or Émile Durkheim tended to take a stance critical to economics. And,

¹⁶Reilly and Witt (1992), and Yamada, Yamada and Kang (1991).

¹⁷Currie (1985), Danziger and Wheeler (1975), Ehrlich (1973), Stevans (1988).

of course, there have been exceptions to the separating tendencies. The late descendants of the historical school, Max Weber, Werner Sombart and Joseph Schumpeter are prime examples. But overall, little interaction between the two disciplines has taken place between about 1930 and 1980, with some signs of renewed contact and cross-fertilisation appearing since then.¹⁸

Given this state of affairs, it is not surprising that only a handful of authors in sociology respectively economics of crime have been combining elements of both disciplines in their work. This section reviews the work of those authors who have done so while accepting the economic model of man in one or the other variant as their methodological base. As it happens, this may also be seen as a discussion of elements of anomie theory, subculture theory, the theory of differential association and the labelling approach. Emphasis is put on the way the economic account of crime has to be modified if sociological elements are introduced.

Frey and Opp (1979) provide a comparison of the economic approach to crime and anomie theory. Anomie theory goes back to Merton (1957), with antecedents in the work of Émile Durkheim. Its central hypothesis is that crime as a variant of deviant behaviour will be the more likely the stronger a certain cultural goal is felt and the less legitimate means to achieve this aim are available to a group of actors. Social norms are a further intervening variable. The weaker norms promoting legal means to reach the goal, and the stronger are norms allowing illegal means to reach the goal, the more likely is crime. Stated like this, methodological differences aside, anomie theory seems to be but a version of a general economic model of crime as sketched out in the two previous sections. The last section has emphasised the crucial role of the legal earning capacity of an actor for his decision to commit an offence. In section 2 above it was readily conceded that social norms may influence the disutility of the criminal activity, v , and they may also influence the disutility of legal work, w . While the economic approach does not emphasise the role of social norms as determinants of non-monetary rewards or costs of actions, it is compatible with such a role.

Frey and Opp, however, conclude that a reconstruction of anomie theory in the language of the economic approach does *not* level the differences between the two. First, norms and hence preferences are influenced directly by the existence of a tension between culturally determined goals and legitimate means. Legitimate norms will be weakened, illegitimate norms will be strengthened. By introducing a hypothesis about preference change, anomie theory goes beyond the economic approach. Second, the discrepancy between goals and legitimate means as well as the availability of illegitimate means will not vary randomly in a population but will be correlated within social strata. This produces subcultures where criminal behaviour is supported by corresponding norms. Such subcultures are not simple statistical artefacts but are stabilised by the direct interaction of the members of the subculture.

Two further claims in the paper by Frey and Opp facilitate the precise understanding of direct interaction effects. They argue, independent of what they interpret anomie theory to be, that what matters are not the objective constraints/opportunities but the subjective perception of them. While Frey and Opp stick to the usual economic rationale for an identity of the two when possible sanctions are underestimated, they are less optimistic if the contrary is the case. They furthermore

¹⁸Swedberg (1990) presents both, a concise account of the history of the relationship of the two disciplines and a survey of the new tendencies. On pp. 8-18 he introduces the above periodization.

stress that it is the availability of legal opportunities in the *local* physical and social environment of actors and the sanctions faced there which matters.

Direct personal interaction may stabilise subcultures through informal sanctions by the day to day interaction partners of an actor. These may reach in severity from simple expression of disapproval over ostracism to the inflicting of severe physical harm. Informal sanctions may help to enforce any social norm, whether in line with legitimate norms or not. Thus they may strengthen or weaken the grip of the law. Felson (1986) provides a detailed account of how informal sanctions become relevant, assuming legitimate social norms. Combining elements of social control, routine activity and rational choice theory, he provides a minimal setup for informal sanctions. A potential offender has to have at least one social contact, the "intimate handler", whose disapproval affects the potential offender, be it intrinsically or instrumentally. Close kin are usually a case in point. This person has to be contactable by a person who might observe any potential offence, the "guardian". Felson then describes how the density of social ties in closely knit, locally concentrated, communities provides a multitude of social relationships which can be turned into "handler" and "guardian" at any time, significantly lowering crime rates. The more sparsely knit or the more spacially dispersed the web of social contacts is, it is argued, the less effective are informal sanctions, causing crime rates to be higher in urban areas.

Kunz (1976, 1993) who also discusses the concept of a criminal subculture, emphasises somewhat different issues. He asserts that a criminal subculture is stabilised by three elements which serve to reduce the probability and severity of official sanctions in such a subculture: A norm of mutual protection by non-cooperation with official authorities, enforced by informal, sometimes drastic, sanctions, and the promise of mutual support in case a member of the subculture has been exposed to legal sanctions. The role of direct personal interaction is again obvious.

Opp (1989) suggests further potential pathways for direct interaction effects when discussing the theory of differential association. Originally it was formulated by Sutherland (1947): "When persons become criminals, they do so because of contacts with criminal patterns and also because of the isolation from anti-criminal patterns." (Sutherland 1947, p. 5. cited after Opp 1989, p. 408). Relating this theory to the economic approach, Opp suggests that systematic differences in the day to day interactions of people may influence their knowledge about opportunities for criminal action or about ways to escape formal sanctions. They may also influence the acquisition of skills for either legal or illegal actions. In all these cases, the subjective positional constraints/opportunities of actors are altered via "objective" changes or a change in perceptions. Furthermore, day to day interactions may also influence the kind of norms internalised and thereby alter the subjective costs of committing a crime.

Taking stock, direct non-market day to day interaction may influence just about all of the factors affecting the choice of an actor between crime and legal activities, either objectively or via perception effects. Of the variables contained in our original sketch of the economic model in equation (1) only income from legal activity, z , and the likelihood of finding a legal job ($1-u$) have not been talked about implicitly above, if any at all. However, it is straightforward that both variables may be influenced via differential information transmission, learning effects, referral effects and the like.¹⁹

¹⁹Montgomery (1991) provides a formal analysis of social network effects on legal earnings.

While all of the work discussed so far remained informal, Sah (1991) has provided a formal analysis which may be read as an elaboration of some of these ideas, especially concerning the differential association approach. In his analysis the probability of apprehension, p , no longer is known "objectively" by all actors in the economy. Rather, actors form their subjective judgement on p by "local" interaction. In each period, the actors observe a fixed number of other actors. The identity of the actors observed is random. Actors learn whether the other actors have committed a crime and whether they have suffered a sanction for it. Using this information, the actors update their beliefs on the value of p . This subjective probability then influences the participation rate in criminal activities, which in turn influences the objective probability of apprehension, which is assumed to decrease if the crime rate rises and the resources devoted to enforcement remain unchanged. This interdependence leads to the possibility of multiple equilibria, i.e. multiple values where perceived p and actual p coincide. If there exist distinct groups in society which are at least partially segregated, i.e. the actors observed by the decision maker are more likely to be a member of his own group than of the other groups, groups may exhibit greatly differing crime rates even if they do not differ in any other relevant characteristics.

For completeness, though it is somewhat unrelated to the issues raised so far, the discussion of the labelling approach by Opp (1989) should not go without mentioning. We will only discuss the criminal career hypothesis here. It maintains that, rather than deterring, criminal punishment condones further crime by labeling the actor who committed the crime a "criminal", stigmatising him and thus pushing him into a criminal career. When discussing this hypothesis, Opp points out that it could be reconstructed in terms of the economic analysis if one assumes that the stigma accompanying criminal sanctions reduces post punishment legal opportunities, i.e. stigma reduces the opportunity cost of further offenses. If stigma leads to more additional crimes due to criminal careers than it deters by raising the disutility of an offence in the first place, it may actually reduce the deterrent effect rather than increase it, as is e.g. claimed by Posner (1992). Thinking a little bit further along these lines, if stigma is increasing with the severity of the legal sentence, increasing the former than might actually have "perverse" effects. Furthermore, if stigma is important and essentially caused by the first conviction, than its inclusion in deterrence considerations provides an argument in favour of increased punishment for repeat offenders to at least provide some incentives against a criminal career. This implies again less than extreme sanctions for the first time offender.

5. Conclusion

The economic approach to crime and criminal law first and foremost is a method. It does as a method not imply any specific policy conclusion. Neither does it necessarily imply the faith in the deterrence effect of an increase of certainty and/or severity of punishment, nor does it favour extreme sanctions. Crime prevention through social policies decreasing unemployment or redistributing income in favour of the poor sections of society can be justified using its analytical tools. Furthermore, substantial elements of sociological theories of crime can be combined fruitfully with the traditional economic models. This is especially true for the effects of day to day interactions on the decision to commit a crime. While a start has been made in the analysis of such effects, there seems to be ample room for additional formal research in this field, taking into account information effects other than on the probability of apprehension and other interaction effects. The enforcement of informal social norms in social networks is one case in point.

6. Literature

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