THE DANGERS OF STRONG CAUSAL REASONING IN POLICY AND PRACTICE: THE CASE OF JUVENILE CRIME AND CORRECTIONS

Allan Borowski
School of Social Work and Social Policy
La Trobe University, Victoria

Paper presented at the 4th National Outlook Symposium on Crime in Australia, New Crimes or New Responses convened by the Australian Institute of Criminology and held in Canberra 21-22 June 2001
Introduction

Policy responses to social problems are shaped by both normative and utilitarian considerations. The former reflect the social values that underlie prevailing political ideologies and realities, and human, financial, and organizational resources while the latter are based on understandings of effective strategies to alleviate the problem (Cullen and Gendreau, 2000). These responses, in turn, rely on causal reasoning - the logical notion that an understanding of the cause(s) of a problem will provide direction for alleviating it. This is typified by the view of James Q Wilson in Thinking About Crime (1985) who has argued in relation to crime that “the only morally defensible and efficacious strategy for reducing [it] is to attack its ‘root’ causes” (cited by Rein and Winship, 2000:33).

The focus of this paper is on the causes of juvenile crime. This paper seeks to examine the adequacy of causal explanations of juvenile crime and their relationship to tertiary prevention strategies (those designed to reduce crime among youngsters who have been identified as juvenile offenders). It argues that the investment by criminologists in developing causal theories of juvenile crime has not reaped dividends that are commensurate with the effort that has been expended. They have not developed deterministic theories that can explain largely exceptionless connections between characteristics or events and crime. Rather, the theories that the discipline of criminology has developed are frequently inadequate and thereby ‘dangerous’ if uncritically adopted by policymakers and practitioners in their efforts to prevent further juvenile crime. At the same time, the findings of meta analyses of juvenile correctional programs provide scope for strengthening causal explanations of juvenile crime by inductive means of theory building.

Theories of the Causation of Juvenile Crime

As noted above, logic would suggest that policy and, in turn, programmatic responses to such social problems as juvenile crime should be shaped by understandings of their causes. Philosophers of science have long recognized that the concept of causation is one of fundamental philosophical importance, not least because causation is intimately related to explanation and to ask for an explanation of a phenomenon or event is, often, to ask for its cause. Indeed, the paramount aim of science is to identify and systematically describe causal relations that hold in the natural world (Audi, 1999:125).

And yet, philosophers of science have long had considerable trouble with the nature of explanation. Thus, for example, Ludwig Wittgenstein once remarked that what many regarded as the basis of the modern view of the world—that the laws of nature are explanations of natural phenomena - was, in fact, an illusion. And Bertrand Russell argued 90 years ago that the word ‘cause’ was so bound up with misleading associations that it should be completely removed from the vocabulary of philosophers (Weinberg, 2001)

Criminologists have been little disturbed by the angst of philosophers of science regarding the nature of explanation. Enormous investments have been made over a 200-year period in trying to explain the causes of adult and juvenile crime. As we shall see below, although criminologists have seemingly been unconcerned with the nature of explanation they have certainly been concerned both with the criteria for assessing the adequacy of the explanations of crime that have been offered and with continually trying to improve upon these explanations.

What Do They Seek to Explain?

Weis, Crutchfield and Bridges (1996:113) describe a theory of juvenile delinquency as simply an informed ‘best guess’ about the causes of criminal behavior that attempts to make sense of the correlates of delinquency. These correlates typically include one or more independent variables
such as gender, age, race, ethnicity, social class or socio-economic status, family experiences, school performance, peer influences, involvement with drugs, and such individual dispositional characteristics as impulsivity and guilt feelings (Wikstrom and Loeber, 2000:1111).

In a recent and more comprehensive formulation, however, Rein and Winship (2000) argue that a theory of the causes of a social problem involves more than just a best guess. A causal theory must answer four questions. These are:

1. What is the case?
2. What is this a case of?
3. How is the case produced? (What mechanisms/processes produce the case?)
4. Why did this become a case?

Answers to the third and fourth questions presuppose clarity about the answers to the first two questions. That is, before the ‘How?’ and ‘Why?’ questions can be answered we need to be sure that theories have been closely tied to observation—that the answers ‘to the ‘What?’ questions are sufficiently alike to be treated as instances of the same thing’ (Rein and Winship, 2000:15).

In the context of this paper, these questions can be recast as follows:

Which youths are delinquent?
What does it mean to be delinquent?
How do youths become delinquent?
Why are youths delinquent?

Thus, trying to answer the questions ‘How do youths become delinquent?’ and ‘Why are youths delinquent?’ assumes we are clear about two things. These are, first, which youths are delinquent (their salient characteristics or the correlates of juvenile crime) and, second, that the behaviors ‘covered’ by the particular theory (e.g., utilitarian and/or non-utilitarian crime, victimizing and/or victimless crime, sole/individual and/or peer-group offending, ‘career’ crime or non-career crime, serious (violent) and/or non-serious (property) crime, etc.) are sufficiently similar to warrant being treated as instances of the same class or type of behavior (delinquency).

What Explanations Do They Offer?

The investment of more than 200 years of intellectual effort in trying to understand the causes of crime in general and juvenile crime in particular has yielded many and varied explanations. These explanations are both dynamic and continually evolving. They are dynamic in the sense that during particular epochs some explanations have been especially influential or ‘voguish’ (for example, psychoanalytic theory in the pre-World War 2 years and psychodynamic theories in the post-World War 2 years) only to be followed by a ‘fall from grace’ and replacement by another ‘dominant’ theory (restorative justice today, for example). And they are evolving in the sense that later ‘generations’ of theory have often been built on the foundations of their predecessors.

There are various ways to categorize the many competing theories that criminologists (and other social scientists) have developed. Weis, Crutchfield and Bridges (1996) identify nine major theoretical perspectives on the causes of juvenile crime. And Chan (1997) groups the various theories under four headings. These are: (1) classical criminology (including the neoclassical revision), (2) the positive school (including anomic theories, learning theories, subculture theories, control theories, and reintegrative shaming theory), (3) interpretive criminology (including symbolic interactionism and phenomenology), and (4) the critical criminologies (including conflict theories, Marxist theories, the feminist critique, realist criminology, and the post-structural critique). Many of these various
theories, especially the ‘early’ ones, attribute juvenile crime to a single primary cause. Some of these are “distal contextual” causes such as neighborhood or community social disorganization and poverty while others are more “proximal” causes such as poor family socialization processes or negative peer group influences (Wasserman and Miller, 1999:197).

One of the most recent reviews of the state of theorizing about the causes of juvenile crime is that of Tittle (2000). He divides the theoretical literature into four major categories. The first category includes theories that have focused upon differences between individuals who engage in criminal activity and those who do not, as well as the individual differences in the characteristics and experiences of various types of young offenders. This has been where, over the years, the most intense efforts in theory development have been focused. The second category of theories includes efforts to explain why crime rates vary from one society to another or among such social units as cities or communities.

These theories have focused upon the characteristics of these social units. A third category is comprised of the body of theory which, over the last couple of decades, has sought to explain why crime emerges in some situations but not in others. And more recently, considerable energies have been expended on a developmental approach that examines differences in crime (criminal propensity) at different times in the life cycle—the fourth category of etiological theory.

It is possible to identify several features of the more contemporary theories.

1. Many of them are increasingly complex and ‘comprehensive’. This has been achieved mainly by “merging [i.e., integrating] insights from preexisting formulations” (Tittle, 2000:52).

2. Some of this merging process has involved the ‘rehabilitation’ of a number of ‘older’ theories that had previously been rejected, especially by sociological criminologists on ideological grounds. An example of this is the work of Sheldon and Eleanor Glueck undertaken during the 1940’s and which focused on the family as an important source of delinquency (Sampson and Laub, 1988, 1994).

3. A prominent dimension of the complexity of these theories is that they are built on a foundation of multiple causes of crime (not single ‘root,’ or primary, causes). In addition, the causal chain (“a sequence of causally connected events” (Audi, 1999:125)) between the independent variables and the dependent one (juvenile crime) is not a straight one. There has been a move away from “deterministic uni-directional cause–effect models” to ones that construct juvenile crime as “a complex process in which a large number of factors operating at different levels are implicated” (Seddon, 2000:102). And so, as well as the independent variables (the primary causes or distal contextual causes) and the dependent variable (juvenile crime), they also include factors associated with the independent variables and intervening (or mediating or proximal) variables. The intervening variable is the result either of a preceding independent variable, a factor associated with it or other intervening variables or it is the precondition of a subsequent intervening variable.

It is interesting to note in relation to the third feature of the more contemporary etiological theories that, as a group, they capture at least one of the notions, albeit a contested one, of the meaning of explanation held by some philosophers of science. Thus, according to Carl Hempel and Paul Oppenheim (1948, cited by Weinberg, 2001), “the explanation of a general regularity consists in subsuming it under another more comprehensive general law.”
How Adequate are the Explanations?

In criminology, criteria for assessing the adequacy of the theoretical enterprise have been available for a long time. Indeed, it has sometimes seemed as if the breadth and complexity of the criteria that exist in the literature for testing etiological theories was well ahead of the theories themselves (Klein, 1967:1).

Beyond the requirement that the explanation of a social problem address Rein and Winship’s four questions, the most important criterion for assessing the adequacy of a theory is its validity, i.e., whether upon testing the particular ‘best guess’ or more comprehensive theory is supported empirically. A valid theory will also have strong predictive power.

How adequate, then, are the various explanations of juvenile crime? The succinct answer is “not very.” The reasons are manifold. Here are five.

1. The first reason is that many theories have not been empirically tested either due to insufficient resources to gather the requisite data or because they do not lend themselves to testing. They may not lend themselves to testing because of the difficulty of operationalizing and measuring the concepts embedded in them.

2. Second, where more comprehensive theories have been built through merging insights from pre-existing formulations that themselves have not been tested, the foundations of these new formulations are quite possibly shaky at best.

3. Third, where theories have been tested, their predictive power has generally been weak. They have been unable to account for most of the variance in the dependent variable (juvenile crime).

4. Fourth, while Hempel and Oppenheim suggest that explanation and comprehensiveness go hand in hand, it could well be that the more comprehensive theories have not accurately addressed the ‘Which?’ and ‘What?’ questions referred to earlier in this paper before delving into the ‘How?’ and ‘Why?’ ones. In other words, their ambit is so wide that they are trying, unwittingly, to explain diverse behaviors engaged in by a diverse population. This begs the questions of whether all crimes and all offenders should be treated as ‘instances of the same thing.’ As Zimring and Fagan (2000:446) point out, “crime is a collection of legal categories generally linked by a single reporting system but not necessarily part of the same social and behavioral systems” (2000:446). Therefore, theory-builders need to explicitly address the extent to which crimes and young criminals should be viewed as unitary phenomena.

5. A final reason. Although it is conceivable that the multi-causal explanations with their complex, non-linear causal chains may more richly capture the reality of crime causation, the nature of the actual relationships between the variables (merely associational or actually causal) may not have been established. Consequently, they remain in the realm of mere conjecture.

What, then, can we conclude about these etiological theories which, as indicated above, are so important for policy and correctional practice? Tittle (2000:84) puts it nicely:

… theorists have made huge strides in the last two decades and, at least in a probabilistic framework, are now able to broadly outline the causes of criminalization, criminal behavior, and variations in crime rates … Despite this, theories are not yet developed enough to provide fully satisfying explanations or predictions. Theoretical expectations are often wrong, or they rest on probabilities little better than chance; and in the best outcomes, predictions apply mainly to large aggregates.
Conclusions such as this in social science disciplines where theory development is an important intellectual pursuit have led some to believe that, unlike the natural sciences, it is doubtful that a complete explanation will ever be forthcoming in most social science (John Elster cited in Rein and Winship, 2000:36)—that we will never be able to develop causal laws of the kind that can state largely exceptionless connections between events. The real world may be just too complex and too full of confounders to allow confident inferences about the causes of juvenile crime to be made (Kemm, 2001). Indeed, Max Weber, in his notion of ‘adequate causality,’ long ago recognized that social science was capable only of establishing probabilistic relationships rather than deterministic ones (Seddon, 2000:102). The fact that the more contemporary theories speak of ‘risk factors’ that make it more likely an individual will engage in law-violating behavior than they do of the ‘causes’ of crime per se suggests that criminology may have come of age in accepting this inability to progress beyond probabilistic explanations.

But this is no reason for despondency. Rather, it suggests that the aim of etiological theory is not the development of deterministic theories but stronger probabilistic ones. Tittle believes that there is an emerging awareness that research, especially theoretically driven research, lags behind theory generation, that greater attention needs to be given to operationalizing concepts into measurable variables, and that new data need to be gathered. In doing so, stronger probabilistic theory should emerge. Indeed, the recent formulation and testing by Weatherburn and Lind (2001) of their theory of ‘delinquent-prone communities’ suggests reason for optimism. Weatherburn and Lind were able to demonstrate empirically (strongly probabilistically) that poverty and unemployment influence juvenile crime not because they motivate people to offend but because they disrupt the parenting process.

The effects of this disruption are further compounded by peer influences when low-income families are spatially concentrated.

**Weak Explanations of Juvenile Crime: So What?**

Despite the occasional solid theory-building ‘coup,’ such as that of Weatherburn and Lind, considerable work remains to be done in theory development. Most of the causal theories of juvenile crime that we now have available to us imply strong links between particular causes and outcomes. However, the empirical evidence indicates that the links are often much weaker than supposed. And in the case of the many theories that have not been tested at all, the links and their strength are largely speculative. Using weak causal theory to guide juvenile correctional policy and practice does not bode well for the prospects of success in reducing juvenile crime: weak causal links cannot be expected to yield the strong effects that are usually desired by policymakers.

A case in point is drug policy in the United Kingdom. This policy is premised on the notion that illegal drug use is the cause of a significant proportion of acquisitive crime and that drug treatment of offenders who commit acquisitive crime to fund an addiction is, therefore, an important means of crime reduction. However, the empirical evidence does not support this construction of the link between drugs and crime implying that the improved access to treatment is likely to be of limited effectiveness in reducing drug-related crime (Seddon, 2000).

If many of the efforts to date have seemingly failed to yield the sorts of understandings that can constructively guide correctional policy and practice, i.e., strongly probabilistic theories, perhaps another approach can yield better results. Kemm (2001) has observed that “where an intervention is consistently associated with a particular sequel [positive outcomes], it is reasonable, until there is evidence to the contrary, to assume that the association is causal.” Thus, analyses of attempts to prevent further offending can also serve as tests, in part or in whole, of the adequacy of causal theories. Even where the theories underlying the method(s) of intervention employed by the
correctional program are not explicitly stated in its design documentation, and this is frequently the case, they can often be broadly inferred from the types of treatment used in the correctional program. This is because even the most rudimentary of correctional programs seek to change some aspects of or about the juvenile offender that are thought to cause his/her criminal activity.

**From Practice to Theory: What Works in Juvenile Corrections?**

Of course this alternative approach to building stronger causal theories presupposes that there are successful correctional programs to be found and that the judgement of their success is based on research designs that are internally and externally valid. And indeed, the search for such correctional programs has been in train in earnest for at least a quarter of a century. The search for this ‘holy grail’ has been neither uncomplicated nor undemanding.

**Nothing Works**

Perhaps the most famous study of the effectiveness of correctional programs was that of Lipton, Martinson and Wilks (1975). They concluded, on the basis of an analysis of over 200 studies of juvenile and adult correctional programs published between the mid-1940s and mid-to-late 1960s, that these programs were unable to reduce recidivism.

Martinson (1974) offered several possible explanations for these dismal findings. One possibility was that the research studies which were the subject of analysis were not methodologically rigorous enough to capture reductions in recidivism that the correctional programs may actually have been achieving. A second possibility was that programs which might have been effective in reducing recidivism did not do so because they were poorly implemented. And a third possibility was that the means just do not yet exist to engineer the sorts of changes in human behavior that are required to reduce recidivism—to ‘transform’ a delinquent into a non-delinquent. Indeed, Lipton, Martinson and Wilks concluded that ‘nothing works’ in correctional rehabilitation.

A possible explanation for the ‘nothing works’ finding that Lipton, Martinson and Wilks did not contemplate follows from the focus of this paper. That is, given the poor state of theorizing about the causes of crime, the programs, even carefully designed and implemented ones, were necessarily doomed to failure. Such correctional programs could not hope to succeed if their conceptual underpinnings were weak.

More recently, a study similar in intent to that of the Lipton, Martinson and Wilks study was undertaken. In 1997 Sherman, Gottfredson, MacKenzie, Eck, Reuter and Bushway, and MacKenzie submitted a report to the US Congress based on a review of 500 scientific evaluations of crime prevention practices. The evaluations that they drew upon, however, had to meet minimal scientific standards to be included in the study. This reflects an attempt to control for one of the factors that may produce findings that are ‘false negatives.’ It also seems reasonable to assume that during the period since publication of the Lipton, Martinson and Wilks study there has been much greater consciousness of the importance of careful program design and implementation in seeking to assure successful program outcomes.

Nevertheless, Sherman, et al concluded that:

> … the current development of scientific evidence is inadequate to the task of policymaking. Many more impact evaluations using stronger scientific methods are needed before even minimally valid conclusions can be reached about the impact on crime of programs …

(Sherman, Gottfredson, MacKenzie, Eck, Reuter and Bushway, 1998:112)
This conclusion, added to that of Lipton, Martinson and Wilk almost 25 years earlier, paints a very
dark picture indeed. There would seem to be little that program evaluations can offer efforts to
build stronger theories about the causes of juvenile crime.

There’s Lots that Works

But things are not quite what they seem. There is good news. Research has, in fact, shown that
‘there’s lots that works.’ Even Lipton, Martinson and Wilks acknowledged that there were some
exceptions to their ‘nothing works’ finding. And Sherman et al in their study, in contradiction to
their conclusion, pointed to many examples of programs that either ‘work’ or were ‘promising.’
Programs that ‘work’ were reasonably certain to prevent crime or reduce risk factors for crime. The
‘promising’ ones were “… programs for which the level of certainty from available evidence is too
low to support generalizable conclusions, but for which there is some empirical basis for predicting
that further research would support such conclusions” (Sherman, et al, 1998:6)). These programs
were found in communities, in families, in schools, in places and include ones run by police and
criminal justice agencies

However, the richest source of information on what works and what, therefore, has the greatest potential
for contributing to building stronger theories comes from meta-analyses of juvenile correctional (i.e.,
tertiary prevention) programs in general and those targeted on serious and violent juvenile offenders in
particular. (See, for example, Levrant, Cullen, Fulton and Wozniak, 1999; Lipsey and Wilson, 1999;
Cullen and Gendreau, 2000.) Meta analyses have identified effective correctional interventions through
a systematic synthesis of experimental and quasi-experimental quantitative research findings. They
utilize a technique ‘whereby the raw data from separate evaluations are used to construct standardized
measures of treatment outcome across individual studies, controlling on treatment and sample
characteristics’” (Denver Juvenile Justice Integrated Treatment Network (DJJITN), 2000:13).

The meta analyses are not unproblematic for theory-building purposes. This is because they rarely
specify the theories that inform the programs that have been evaluated. If they did, the program
evaluations covered by the meta analysis would serve as deductive tests of these theories. But the
meta analyses do indicate the type of treatments or interventions that were utilized. An examination
of those interventions that have proven to be effective allows the meta-analyst to inductively infer
the causal reasoning underlying the interventions. Thus, knowledge about the causes of juvenile
crime can be built from knowledge about the effectiveness of particular interventions.

In at least one instance (e.g., Wasserman and Miller, 1999) a meta analysis also indicates the
‘intermediate outcomes’ that are being sought by the intervention programs—the client changes that
they are hoping to achieve upon program completion (Kettner, Moroney and Martin, 1999:132). (The
‘final outcome’ sought by correctional programs is, of course, a reduction in recidivism measured at
some future point in time, e.g., 6 or 12 months after completion of the program.) Knowledge of the
targeted intermediate outcomes of effective programs is an especially rich source of information for
inductively inferring the causal reasoning underlying the program. Unfortunately, Wasserman and
Miller’s meta analysis cannot help us here as it focuses only upon primary and secondary prevention
programs that serve different populations from the ones that are the focus of this paper (identified
delinquents).

What Works? Changing Offender Behavior

The meta-analysis literature points to an increasing consensus that those programs that are able to
reduce recidivism share some common features. Several of these are program design features (Levrant,
et al, 1999; Cullen and Gendreau (2000). One design feature of effective programs is that they match
the level of service to the risk level of the offender. Thus, meta analyses have found that a reduction in
recidivism among high risk offenders, for example, requires intensive services over a lengthy period of time. (Note that intensive services with low-risk offenders may actually increase recidivism.) A second is that effective programs match their services with the learning style and personality characteristics of offender (Levrant, et al, 1999).

Effective programs are also characterized by design features that have to do with aspects of how they are organized, staffed (highly trained personnel) and managed (ongoing staff supervision and development) (Borowski, 1986; Lipsey and Wilson, 1999).

Within the context of the focus of this paper on the causes of crime, however, other features of successful correctional programs identified by Levrant et al (1999), DJJITN (1999) and Cullen and Gendreau (2000) are of particular importance. The first is that successful programs are those that are able to address (are responsive to) the ‘criminogenic needs’ of offenders. Criminogenic needs include antisocial attitudes, values, and beliefs (as manifested, for example, in a lack of empathy for others), poor family communications, anti-social peer relationships, anti-social personality factors (such as impulsiveness, risk-taking, and low self-control), etc—those potentially changeable risk factors that are known to be associated with recidivism (Levrant, et al, 1999:18; Cullen and Gendreau, 2000:145)). They address these needs through cognitive behavioral skills training approaches that seek to build such skills as problem-solving, self control, communications, moral reasoning, restructuring criminal thinking, and developing conflicts resolution strategies. The training approaches are based on theories of social learning (through modeling prosocial behavior), reinforcement (through practice) and conditioning (through rewards).

The findings of Lipsey and Wilson’s (1999) meta-analysis are summarized in some detail in a single table (p. 332). They are quite consistent with those just presented. In summary, Lipsey and Wilson found that:

… the types of treatment that consistently showed positive effects in the studies for noninstitutionalized youth were individual counseling, interpersonal skills training, and behavioral programs.. For institutionalized [more serious] offenders, the consistently effective programs were interpersonal skills training and an approach called “teaching family home,” in which offenders were placed in a group home with “teaching parents” who developed positive teaching relationships with the youths and served as advocates for them in the community.” (DJJITN, 1999:14-15)

Conclusion

The meta analyses cited above, even though they draw on programs whose underlying conceptions of causation and intermediate outcomes are not explicated, nevertheless point to the features of successful juvenile correctional programs. These characteristics, in turn, suggest that efforts to build stronger causal theories should focus not on distal factors in the larger social context (e.g., poverty and neighborhood deterioration) but on elements that are much more proximal, that rest in the young offender’s cognitive behavioral learning environment. Given that successful programs are ones that address criminogenic needs, the sites that fail to obviate those needs arising in the first place appear to be the more important foci for theory development.

It is now up to theory-builders from among the fraternity of criminologists to draw upon the insights of meta analyses in building theories that explain the causes of juvenile crime. The stronger probabilistic theories that should evolve from such a process should make a substantial contribution to the adoption of policies and programs that have very good prospects indeed of reducing juvenile crime—of reducing the dangers associated with strong causal reasoning.
References


Klein, Malcolm W. 1967. Criminological Theories as Seen by Criminologists: An Evaluative Review of Approaches to the Causation of Crime and Delinquency (Prepared for the Governor’s Special Committee on the Criminal Offender, State of New York) Los Angeles, California: Youth Studies Center, University of Southern California. December.


