

DELINQUENCY

CAUSES, REDUCTION AND PREVENTION



Criminal
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Series

Ozan Sahin
Joseph Maier
Editors

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DELINQUENCY: CAUSES, REDUCTION AND PREVENTION

**OZAN SAHIN
AND
JOSEPH MAIER
EDITORS**

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PREFACE

Delinquency is an antisocial misdeed in violation of the law by a minor. This book examines the correlation between family environment and juvenile delinquency and criminality. Also discussed are the social factors that influence delinquent behavior. The unresolved and contentious issue of different explanatory "types" or "etiological patterns" among delinquents and the conflict this creates for advocates of "general theory" in delinquency are also addressed. Additional chapters look at adolescent religiosity as a factor for delinquency, psychopathic tendencies and causes of delinquency from a biosocial criminological perspective.

Chapter 1 - Theoretical approaches in delinquency have prioritized the search for a "general" global theory with the assumption that a single unified theory underlies all delinquency (e.g. strain theory, social control, social learning, low self-control, etc).

Recent theorists have also attempted to integrate various elements of these diverse theories into a unified general model (e.g. Farrington 2003, Elliot et al 1985, Sampson and Laub 2005). In contrast, the taxonomic approach adopts a theoretical pluralism that denies the existence of a single unified explanation. It aims to unravel delinquency populations into multiple categories or sub-types that may represent diverse causal processes. Moffitt (1993), Lykken (1995) and others, offer such proposals.

The theoretical stakes are high with advocates on both sides. The Authors will address several issues central to this debate including: Can diverse types of delinquents be reliably identified? Are the boundaries between types distinct? What kind of taxonomic structure exists in this population? The Authors then report on a large scale (N = 3070) replication and refinement of a previously published delinquent taxonomy using the Youth COMPAS assessment system (Brennan, Breitenbach and Dieterich 2008).

Multiple validation methods were used. Substantially the same results emerged, with evidence of stable taxonomic structure in which six out of seven replicated types emerged; these were again nested within five more super-ordinate clusters. These types had multiple matches in the prior literature on explanatory delinquent typologies. The authors finally explore the implications of our findings for the debate over the general theory paradigm.

Chapter 2 - There are nearly as many supposed causes of juvenile delinquency as authors writing on the subject! While a consistent sociological literature has been produced on the sociological mechanisms of the aetiology of juvenile delinquency, and while an equally consistent psychosociological literature has also been produced about peer group influence on the same topic, much less has been published on the influence of family environment.

Though, not all poor children become delinquent! The authors present here a review about what they have learnt from developmental psychopathology works concerning this question.

Chapter 3 - Involvement in delinquent behavior is quite common during adolescence, and many authors consider it to be a transient phenomenon. However, the prevalence of mental disorders in juvenile delinquents appears to be relevant. It has been proposed that emotional disturbances are frequently associated with neuropsychological dysfunction as a result of a common biological, mainly genetic origin. Among cognitive dysfunctioning, impairment in executive cognitive functions (ECF) may be related especially to mental disorders, to failures in personality development, and to conduct and personality disorders. ECF include cognitive flexibility, hypothesis generation, abstract reasoning, problem solving, selective attention, inhibitory control and ability to organize and use information contained in working memory, all fundamental in social cognition and social behaviors. High prevalence rates (up to 80%) of ECF deficits have been reported in juvenile criminals. ECF and other neuropsychological and cognitive impairments, such as lower IQ and verbal deficits, have been associated with the pattern of antisocial and delinquent behavior starting in childhood (early-onset), but not with late-onset antisocial behavior. Based on this background, their purpose was to evaluate ECF in a sample of adolescents and young adults, with a pattern of late-onset delinquent behavior and no antecedents of conduct disorder, referred to the Social Services of the Department of Juvenile Justice of the city of Messina (Italy). The hypothesis tested with this design was that late-onset delinquent adolescents and young adults differ from nonantisocial controls matched for age and educational level on neuropsychological measures sensitive to ECF dysfunction (Stroop Color-Word task, or Stroop task; AB-AC; Raven's Standard Progressive Matrices (SPM); Verbal Fluency, both Phonemic and Semantic; and Winsconsin Card Sorting Test). Results showed significant differences between late-onset offenders and control groups on the following tasks: Stroop ($t = 3.570$; $p = < 0.0001$), SPM ($t = -7.174$; $p = < 0.0001$), and Phonemic Fluency ($t = -10.743$; $p = < 0.0001$). Chi-square analysis showed that a significantly greater number of late-onset offending participants scored in the clinical range on several ECF measures. Current findings add to the growing literature comparing juvenile offenders to other adolescent populations. These results imply that executive cognitive impairment, even subtle and subclinical, may be a contributing factor in the development and persistence of antisocial behaviors displayed by late-onset adolescent delinquents. The findings also suggest the need for additional research aimed to assess a broader range of cognitive abilities and specific vulnerability and risk factors for late-onset adolescent offenders.

Chapter 4 - Reputation enhancement theory is a dominant theory in the juvenile delinquency literature. It has clearly established that a delinquent identity requires public proof of a deviant disposition and that deviant acts are committed not alone, but in the company of others. Therefore, self-image is fostered by the visibility of actions to others, and perceptions and descriptions of oneself and others. If these are key elements on which the psychology of reputation is built, how then does this apply to adolescents who commit delinquent acts, but alone? Very little is known about the delinquent activities and reputational orientations of adolescent loners, yet recent research by the authors clearly shows the unique profiles of these individuals. In this chapter, the authors present the findings from a series of studies which they believe to be the only ones to date pertaining to the delinquent activities and reputational orientations of loners.

First, the instruments we have developed over time to measure these aspects of adolescents' behavior are briefly described along with their psychometric properties. Following this, the authors present empirical evidence from our research in which the authors employed various statistical analyses to compare the self-report delinquency and reputational orientations of adolescent loners and nonloners.

Chapter 5 - This chapter presents an investigation of the patterns of offending and antisocial behaviour amongst young people from the age of 11-16 years who are categorized as high risk or vulnerable to delinquency and antisocial behaviour. The chapter will draw upon findings from the first five datasweeps of the Belfast Youth Development Study (BYDS), a longitudinal study of the onset and development of adolescent problem behaviour. Through a detailed exploration of the onset and development of delinquency and antisocial behaviour from the age of 11-16 years it will provide insights for targeting and development of appropriate interventions for school aged high risk young people who do not attend mainstream school in adolescence. The findings will form the empirical base for a discussion of the key issues around appropriate interventions and the development of conclusions in relation to young people who have received comparatively less attention in the delinquency literature but who are considered more likely to offend during adolescence.

Chapter 6 - The first section of this chapter reviews evidence showing that although greater religiosity has been associated with less involvement in delinquent and analogous behaviors, the mechanisms and processes through which religiosity is linked to delinquent behavior are not well understood. In the second section of the chapter, a conceptual framework and theory for studying the religion-delinquency association will be presented. The framework adapts and builds on Gottfredson and Hirschi's (1990) General Theory of Crime. The third section of the chapter presents results of the initial study guided by the framework. Data are drawn from a longitudinal study of development during the transition from middle childhood to adolescence. Participants ($n = 181$) completed standard self-report assessments. Results provide initial evidence that the link between religiosity and delinquent behavior problems can be explained by the reduced opportunities and dispositions to engage in delinquent behavior more common among highly religious than less highly religious adolescents.

Chapter 7 - New instrumentation measuring psychopathic-like-traits and aggression in children and adolescents suspended from mainstream school were developed. One hundred and seventeen psychopathy related items and 63 aggression items were generated from reviews of current instrumentation and interviews with school personnel, psychologists, and detention centre officers.

These were subsequently reduced to 56 and 20, respectively. Data from one pilot study and the preliminary analysis of data from a larger scale study analyzed using item affectivity and discrimination resulted in 43 psychopathy items and 20 aggression items being retained. Maximum likelihood factor analyses of data from 137 suspended mainstream school students revealed four factors for psychopathy (Callous/Unemotional, Narcissism, Thrill- Seeking, and Moral Detachment of Self) and three for aggression (Physical Aggression, Reactive Verbal Aggression and Proactive Verbal Aggression). Cronbach's alpha revealed high internal consistency.

Chapter 8 - Violent offending by young people is a visibly growing problem for both society and the particular individuals involved. Recent research conducted in the United Kingdom revealed that over 20% of 10 to 25 year olds report having committed a crime, 59%

of which were violent offences (Wilson, Sharp and Patterson, 2006). Prior research has examined particular factors that make children and adolescents more inclined to criminal activities and whether these factors are controllable. This study looks at the interaction of risk factors at the family, social and community levels by testing a causal model in a sample composed of 2528 participants aged 10-16 who were drawn from the 2005 Offending, Crime and Justice Survey dataset.

To begin with, the authors review some data on the prevalence of violent offending among young people in different countries, and continue by discussing some of the main family, school and community factors that have been related to involvement in violent offending and delinquent behaviours in adolescence. Family variables include quality of children-parent relationships and parenting skills such as family communication. School variables refer to attitude to school and whether the child has been suspended or expelled from school. Finally, community variables include the existence of problem behaviours in the local area and degree of trust in local police.

Following this review, the authors analyse the role played by two other direct antecedents of offending that have been highlighted in the scientific literature, namely antisocial behaviour and victimization. Finally, a causal model is tested to examine the interactions among all the aforementioned variables and their joint contribution to the explanation of youth offending. The model tested explained 22% of the variance in violent offending by the young people in the sample. Victimization and anti-social behaviour independently contributed to the amount of variance, while family, community and school contexts had differential effects on these two proximal causes. By jointly considering the influence of the most important social contexts in adolescence, this study provides a fuller picture and clearer understanding of the risks for violent adolescent offending. Implications and future areas of research are discussed.

Chapter 9 - This study aimed to examine the relation between childhood social behaviors and later delinquency. To assess this relation, we used ratings of the level of difficultness and aggression exhibited by 90 5-year-old children during their interactions with an unfamiliar peer and assessed parent ratings of delinquency at age 5 and parent and self-ratings of delinquent activities five to ten years later. Early social behaviors were related to concurrent parent ratings of delinquency but they were not predictive of later delinquency. However, adolescent peers' delinquent behaviors were correlated with adolescent delinquency. Additionally, there was preliminary evidence that youth who began exhibiting delinquent behaviors as young as age 5 were more likely to show interpersonal difficult behaviors at age 5, whereas those who did not report delinquent behaviors until adolescence did not show preschool difficult behaviors but were equally as likely as the early starters to report having delinquent peers. Thus, although early difficult interactions with peers are related to delinquent activities at the same age, peer play behaviors during childhood are neither necessary nor sufficient causes to account for association with deviant peers or engaging in delinquent activities during adolescence.

Chapter 10 - The discipline of criminology has a long history of focusing narrowly on the environmental correlates to antisocial behaviors, while simultaneously ignoring the possibility that genetic factors are important. With the mapping of the human genome and with the advent of complex brain imaging machines, researchers have been able to study the genetic basis to all types of human behaviors. The results of these studies have unequivocally shown that virtually all antisocial outcomes are the result of genetic *and* environmental

factors working independently and interactively. An emerging perspective—known as biosocial criminology—has recently been advanced as a way of incorporating these findings from the biological sciences into criminology. In the current chapter, the authors provide an overview of the biosocial criminological perspective. In doing so, the authors pay particular attention to explaining gene X environment interactions, gene X environment correlations, and epigenetic processes, and how they affect the development of antisocial behaviors.

Chapter 11 - This research work focuses on twenty-five male adolescents who have been placed in a children's French community home. The authors have developed a theoretical model to deal with the specific identity disorders of adolescents by developing *the concept of narcissistic identity vulnerability* and making it operational. The clinical protocol used and more particularly the hypothetic-deductive methodology applied to case studies constitute a *clinical evaluation method* of narcissistic identity vulnerability that can be transposed, in situations of clinical practice, to problem adolescents with a view to assessing and guiding personalized projects. This concept enables us to offer a *dynamic-economic analysis of maladjusted behaviour* in adolescents.

The authors suggest a clinical battery of investigation that can be applied to clinical practice. This battery including *Wechsler's Intelligence Test*, *Rorschach's Projective Test*, *Life Line and Genogram*, *The Family Test « FAST »* (developed by Gehring and Debry in Belgium), enables us to analyse the adolescent's representation of his family and to grasp the intra-family dynamics and an adaptation to an analysis of adolescents' representation of the institution *The institutional FAST*.

As concerns the suggested model, its results confirm the clinical interest of the concept of narcissistic identity vulnerability which is operational, particularly as we can integrate the physical, cognitive and behavioural dimensions, making it possible to take *the complexity of the bio-psychosocial functioning of the subject* into account.

As for the suggested clinical evaluation method; its results reveal that no index is pertinent in itself and that only a dynamic reading which links the various indicators is meaningful.

The progressive hypothetic-deductive approach used for case studies constitutes a *clinical method* that can be applied in clinical practice.

The etiological, structural and risk diagnosis opens up interesting possibilities for *clinical expertise* which could be *an interesting tool for magistrates* when they have to make decisions as to the socio-judicial answers to be found as concerns notably *juvenile offenders*.

Chapter 12 - Premeditation in homicide is defined as the clear intention to kill someone preceding the act. There is little research on the personal and social context and the psychological and pathological variables associated with premeditation.

Our study compares two groups of inmates, all convicted of homicide, through 210 penal and prison files of the male homicide inmates of the Muret Detention Centre (South West region of France).

The groups were constituted on the basis of the penal conviction label: 94 were labelled "premeditated murder" (group 1) and 116 "unpremeditated murder" (group 2).

The results revealed socio-demographic, psychiatric and forensic differences between the groups.

In the logistic regression model, a higher risk of committing a first degree murder (vs. second degree) was related to being socially isolated during the days preceding the homicide

(OR 2.86). Furthermore, jealousy motives (OR 5.80) and revenge motives (OR 8.33) were the most significant risk factors in committing premeditated murder.

Finally, we discuss these results and propose two distinct criminological profiles for the individuals in the two groups.

Chapter 13 - The search for the origins of antisocial and delinquent behavior has a long and rich history in the fields of personality and abnormal psychology. Current thinking suggests that a combination of two orthogonal personality traits, shyness *and* sociability, may play an important role in understanding antisocial and delinquent behavior. The author argues that an interaction of these two traits results in a “socially conflicted” personality style. Socially conflicted individuals exhibit distinct patterns of brain and autonomic activity at rest and in response to social challenge and are at risk for antisocial and delinquent behaviors. These individuals may engage in risky and antisocial behaviors as a means of coping with their conflict.

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Chapter 1

THE TAXONOMIC CHALLENGE TO GENERAL THEORIES OF DELINQUENCY: LINKING TAXONOMY DEVELOPMENT TO DELINQUENCY THEORY

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ABSTRACT

Theoretical approaches in delinquency have prioritized the search for a “general” global theory with the assumption that a single unified theory underlies all delinquency (e.g. strain theory, social control, social learning, low self-control, etc).

Recent theorists have also attempted to integrate various elements of these diverse theories into a unified general model (e.g. Farrington 2003, Elliot et al 1985, Sampson and Laub 2005). In contrast, the taxonomic approach adopts a theoretical pluralism that denies the existence of a single unified explanation. It aims to unravel delinquency populations into multiple categories or sub-types that may represent diverse causal processes. Moffitt (1993), Lykken (1995) and others, offer such proposals.

The theoretical stakes are high with advocates on both sides. We will address several issues central to this debate including: Can diverse types of delinquents be reliably identified? Are the boundaries between types distinct? What kind of taxonomic structure exists in this population? We then report on a large scale (N = 3070) replication and refinement of a previously published delinquent taxonomy using the Youth COMPAS assessment system (Brennan, Breitenbach and Dieterich 2008).

Multiple validation methods were used. Substantially the same results emerged, with evidence of stable taxonomic structure in which six out of seven replicated types emerged; these were again nested within five more super-ordinate clusters. These types had multiple matches in the prior literature on explanatory delinquent typologies. We

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finally explore the implications of our findings for the debate over the general theory paradigm.

INTRODUCTION

This chapter addresses the unresolved and contentious issue of different explanatory “types” or “etiological patterns” among delinquents and the conflict this creates for advocates of “general theory” in delinquency. We also explore the on-going development and validation of a previously published taxonomy of delinquent youth (Brennan, Breitenbach and Dieterich et al 2008). This taxonomy is subjected to several new tests of replication and we examine the degree to which it generalizes on a large new sample. In this paper we focus on a male only sample. An analogous taxonomy for female delinquents has been separately presented (Brennan 2008). The examination of males only was motivated by the possibility that different pathways may exist for boys and girls driven by the differential importance of certain factors (e.g. sexual abuse, relationship issues, parental supervision etc) and the possibility of heterogeneous interactions leading to different patterns of explanatory factors by gender. Thus, this paper aims to achieve more precise, homogeneous and explanatory profiles for boys. Finally, an overall theme of this chapter is to explore some of the theoretical implications of typological analysis for delinquency research.

The chapter is structured as follows. First, several contentious but critical issues are examined regarding whether “types” exist, given the anti-typological views of many prominent delinquency theorists. Second, we briefly review the prior literature on explanatory typologies of male delinquents and we identify several recurring types in this body of research. We then conduct a replication of our earlier taxonomic analysis on delinquents (Brennan, Breitenbach and Dieterich 2008). This examines the degree to which the types generalize on a new sample ($N = 3070$) and the similarity between original and replicated types. We incorporate the McIntyre-Blashfield (1980) replication test to examine both cross sample and within-sample robustness of this typology. All seven types from the earlier taxonomy re-appear in the validation sample, however one small cluster from the original taxonomy was unstable and did not recur in the new taxonomic analysis of the validation sample. We then assess whether the present types replicate or match any of the type profiles identified in prior published research on delinquent types (Warren 1971, Rubenfeld 1976, Harris and Jones 1999 and others). To conclude we discuss some theoretical implications of our taxonomic findings. In the debate on the “existence” of delinquent types the present findings offer additional evidence of the reality of these types. In this spirit we invoke Salmon’s (1984) well known maxim that it is a “damn strange coincidence” when highly similar empirical data structures re-emerge across diverse mathematical approaches, different falsification tests and different samples (Meehl 1992).

GOALS

The goals of this chapter are as follows.

1. In the first section we discuss several issues pertaining to the theoretical debate between advocates of a “general theory” of delinquency as opposed to the typological approaches and theoretical pluralism.
2. In the main empirical section we replicate and further develop a previously published taxonomy of delinquent youth.
3. We will examine the structural evidence that may support or detract from the conjecture that taxonomic or categorical structure exists in the explanatory causal domain of delinquency.
4. We contextualize our typological findings by examining the congruency of the new type patterns against prior published explanatory typologies of delinquency in the social-psychological explanatory domain. Since the classic integrative studies of Rubenfeld (1967) and Warren (1971) an increasing number of studies have aimed to build taxonomies on a broad range of social and psychological domains (e.g. Stefurak and Calhoun 2004, Harris and Jones 1999). This literature remains scattered and poorly integrated.

THEORETICAL ISSUES AND TAXONOMIC RESEARCH

The theoretical importance of the present study would best be explicated by examining the reciprocal links between taxonomy and theory development. However, this topic is large and complex so that a full presentation is beyond the scope of this chapter (see Enc 1972, Thagard 1992, Murphy 2006). However, we comment on several issues that seem particularly pertinent to the current situation in criminological theory:

1. The dominance of the General Theory Paradigm: The dominant paradigm in delinquency theory denies the existence of types both in regard to criminal specialization and in terms of differentiated explanatory patterns. Instead, many prominent criminologists prioritize the development of a unified or global explanatory theory of delinquent behavior (e.g. Gottfredson and Hirschi 1990; Jessor et al. 1991; Sampson and Laub 2005, Thornberry 2005, and others). This paradigm assumes that a single causal explanatory process underlies all forms of delinquency and that distinct etiological types do not exist. Such omnibus general explanations include the General Theory of Crime of Gottfredson and Hirschi (1990), Sampson and Laub’s General Age-Graded Theory of social-control (1993), Agnew’s General Strain Theory (1997), Cohen and Felson’s (1979), Routine Activities Theory, and several “integrated” unified theories (Catalano and Hawkins, 1996; Farrington, 2003; Thornberry 1987; Elliott, Ageton and Cantor, 1984, and others).

The “anti-typological” stance among criminologists is shown in several ways. It is reflected in a tendency to deny or ignore the existence of types. Hirschi and Gottfredson (1994) starkly dismiss taxonomic heterogeneity ascribing most criminal behavior to a single “persistent underlying trait.” Sampson and Laub (1993, 2004) reject the typological approach partly for its methodological difficulties and the belief that the fundamental causes of delinquency are the same for everyone. They also claim that typological results are unreliable and that the groups often discussed in this literature are “tenuous”. David Farrington (2003) underlined the on-going dominance of the global theory paradigm in a presidential address to the American Society of Criminology, noting that most recent theoretical developments, with

the exception of Moffitt's (1993) taxonomic theory, do not support the idea of types. Osgood (2005) explicitly states his preference for general theories and the "dimensional" data structures assumed to underlie the causal reality of general theories of delinquency.

However, it is worth noting that in spite of decades of research to test, refine and compare such omnibus theories none of them has achieved general acceptance among criminologists. Additionally, most remain only partially supported, and numerous studies show only modest empirical support for any of these theories (e.g. Mak, 1990, LaGrange and Silverman 1999; Longshore et al 2004; Longshore and Turner 1998; Hay and Forrest 2008, and others). The contents of any recent annual meeting of the American Society of Criminology (ASC) will show that most of the general theories remain in contention.

2. The lack of analytical categories in delinquency as a basis for theoretical development: However, from the perspective of theory development a key role of taxonomic research in any science including criminology is to produce analytical categories and causally homogeneous types that can identify and demarcate some natural classes or coherent process. These categories - often known as scientific objects (Daston 2000) - can then become starting points for more focused explanatory or theoretical questions to clarify, define and progressively explicate the causal structures underlying the identified category or process (Bryant 2000, Thagard 1992). In this regard, Belnap (2006) has argued that we have not yet established appropriate analytical categories for delinquency explanations of either boys or girls. Belnap also argues that much theorizing in delinquency is premature since the preliminary taxonomic work of establishing basic categories of delinquency has been neglected. More than two decades ago Cernkovich and Giordano (1979) complained about criminological theorists rushing into print with causal models of delinquency before knowing what it is they are explaining.

This typical scientific sequence appears to have been ignored in the field of delinquency research as theory development was quickly prioritized leading to a tendency to leapfrog or ignore basic taxonomic tasks. Sadly, this lack of clear coherent categories of delinquents continues to the present and remains widespread. Tremblay (2003), for example, in a broad review of the current status of causal analysis and delinquency taxonomies - whether of behavioral phenotypes, criminal careers or explanatory taxonomies - asserted that this field still does not yet have clear, agreed upon or consensus categories to support effective causal and theoretical research. Thus, a consistent hazard for delinquency research and theory development is that even the dependent variable (e.g. delinquency, variously defined) or the delinquent population or target group being studied, is often a hodge-podge of diverse latent classes that does not represent any clear category or pattern (Richters 1997). This is reflected in Tremblay's conclusions following his review of behavioral and explanatory taxonomies in delinquency:

"Considering its prevalence....its social relevance....one would expect a well established taxonomy. Unfortunately, this is not the case" (p.186).

Thus, the substantial failure in criminology and delinquency to address the critical task of descriptive taxonomy is still largely unaddressed. It appears that we still need to discover or demarcate suitable "scientific objects" for further study (Daston 2000). Such taxonomic progressions can then reciprocally interact with on-going theory development to refine and clarify the causal mechanisms that may produce and underlie the taxonomic patterns. In this

way there is a complex interaction between refinements of both the initial taxonomy and evolving theory related to the relevant taxonomic categories (Enc 1972; Hey 2001).

The damage to criminology and delinquency research of ignoring basic taxonomic work is perhaps enormous. In the absence of identification such scientific objects or categories cannot be accurately described, experimentally manipulated, and compared with appropriate contrast categories to build new knowledge and theories. The fields of psychopathology and personality theory are aware of this typical scientific sequence of tasks. For example, Cattell (1940) emphatically stated that: “nosology precedes etiology”. Biologists are also emphatic of the need to carefully establish basic pre-theoretical descriptive classifications and patterns prior to theoretical and explanatory work (Brady 1994). (added linebreak)

In delinquency this disinterest in basic taxonomic research and the prioritization of general theory continues, paralleled by a fairly strong anti-taxonomic attitude among several major theorists. The present study thus runs counter to this tendency by tackling two early tasks of taxonomic research i.e. discovery (identification) of patterns/homogeneous categories and their empirical description.

TAXONOMIES AND THEORETICAL PLURALISM

Taxonomic research has a different set of assumptions from the general theory paradigm. It rejects the idea of a unified global theory and the assumed causal homogeneity that purports to explain all forms crime and delinquency. It embraces an explanatory model that assumes theoretical pluralism and the existence of heterogeneous or differentiated offender categories (types) representing multiple causal processes or pathways to criminal behavior. It asserts that the dominant paradigm mistakenly tries to “force” all forms of delinquency and delinquents into a single promethean structure. Several difficult and unresolved theoretical and empirical issues are involved in this controversy:

Causal homogeneity vs. Heterogeneity: Does theoretical pluralism occur in criminology? Theoretical pluralism is usually understood as describing a situation where no single explanation or theory is sufficient for a given domain. In this approach several different theories or explanatory processes may apply within diverse categories and/or different phases or processes within a given domain. Such pluralism is compatible with the taxonomic approach and is prevalent in most scientific fields e.g. biology, ecology, genetics, medical diseases, psychopathology, and so on (Beatty 1994, Richters 2001).

The explanatory taxonomy that has emerged for medical diseases (Thagard 1999) may be instructive to criminology in its delineation of several broad “generic” explanatory categories with several disease sub-types nested within each broad causal category. This explanatory schema has four broad disease “genera” or causal categories. The clarification of these different explanatory categories was instrumental in the development of different treatment approaches to each category. These explanatory categories of medical diseases are as follows:

1. Nutritional diseases – These diseases result from the body being deprived of some critical nutrients (e.g. scurvy, beriberi). Explanatory analogues in delinquency causation may include theories emphasizing social deprivation, strain and low human and social capital (Lykken 1995; Walsh 2002).

2. Infectious diseases – This category has several subtypes based on different subclasses of infectious agent e.g. bacteria, viruses, fungi and the recently discovered infectious agent named prions (Creutzfeldt-Jakob disease). Theoretical analogues in delinquency may include models that emphasize social learning theory and the learning of anti-social attitudes, excuses and neutralizations, skills, motives, etc.
3. Molecular-Genetic diseases – This more recently recognized category has two broad sub-categories. Mendelian diseases, (e.g. cystic fibrosis) are caused by an inherited mutation in a single gene. Its sub-categories emerge from mutations arising from any of the five Mendelian inheritance processes. The second broad molecular-genetic category includes Multi-factorial diseases (e.g. hypertension, cancer, atherosclerosis, diabetes) that may involve complex interactions of multiple genes (polygenic processes) and various environmental factors. The discovery of this explanatory category introduced advances in molecular medicine and new families of treatments. In criminological research the theoretical biosocial taxonomies of Lykken (1995), Mealey (1995) and Moffitt et al (2001) all include multi-factorial pathways in which biological factors are involved in complex interactions with environmental factors that unfold in several complex developmental pathways (Walsh 2002).
4. Autoimmune Diseases – This category includes several diseases that emerge when the person's immune system becomes overactive and attacks rather than defends the body (e.g. Lupus). While it may be a stretch, analogues of this category may include various psychological and neurotic conflicts leading to anti-social behavior. For example, Lykken (1995) describes a broad “genera” of neurotic/internally conflicted criminal types (paranoid personalities, limit-testing punishment seekers, and so on).

The above illustrates the broad links between theoretical pluralism and taxonomy and the more precise targeting of different intervention and treatment approaches based on improved understanding of the diverse causal categories within a domain. Medical interventions have clearly advanced in parallel with the clarification of the taxonomic diversity of disease categories and their underlying causes. We clearly do not claim an exact analogy between the criminological and medical domains and offer the above framework only as illustrative of the manner in which basic taxonomic research may facilitate new directions in determining the causes of crime, for designing more precise target populations and guiding more focused differentiated treatment and interventions in response to particular types of offenders and their crimes.

Theoretical pluralism also characterizes the emerging meta-discipline of dynamic or open systems theory that has recently entered developmental delinquency and child development studies (Richters 1997; LeBlanc 2005, 2006; Wachs 2000). Open-system concepts such as equifinality (multiple pathways to the same end) and multifinality (diverse end states emerging from the same initial state) imply a diversity of developmental pathways. Richters (1997) argues that equifinality as used in developmental psychopathology explicitly signifies that different structural/causal processes can underlie similar overt patterns of child problem behavior and that these processes jointly involve interactions between genetic influences, cognition, emotion, behavior and psychopathology (Cicchetti and Richters, 1993). Richters concludes that equifinality (or causal pluralism) is a ubiquitous characteristic of human functioning and development.