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CRIMINOLOGY

THE EFFECT OF FORMAL AND INFORMAL SANCTIONS ON DELINQUENCY: A LONGITUDINAL COMPARISON OF LABELING AND DETERRENCE THEORIES*

CHARLES W. THOMAS**
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I. INTRODUCTION

Theoretical conflicts and contradictions tend to be more apparent than real. They commonly are based on little more than the choice of quite different levels of analysis, dissimilar operationalizations of key concepts, or a host of other factors that can foster significant misconceptions. From time to time, however, one encounters theoretically and substantively significant situations within which very matter-of-fact contradictions do exist. The purpose of this Article is to address one such contradiction in contemporary criminological theory and research.

More specifically, the past two decades have witnessed a mas-

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sive increase in the theoretical and empirical literature associated with labeling and deterrence theories. The similarities between these two perspectives are numerous. Both adopt a social psychological level of analysis. Both evidence a special concern for the manner in which sanctions shape human behavior. Both, in practice if not necessarily in theory, place particular significance on those types of sanctions that are formal rather than informal. Both have had unusually pervasive and obvious effects on social policy formulations. Notwithstanding these and other common denominators between labeling and deterrence theories, advocates of both have arrived at flatly contradictory conclusions regarding how sanctions influence human conduct. Reduced to their fundamentals, labeling theorists view sanctions as one of the most significant mechanisms by means of which actors are pushed from exploratory or "primary" deviance to systematic or "secondary" deviance. Deterrence theorists contend that the threat or actual imposition of sanctions so elevates actors' perceptions of the risk of non-normative behavior that they will choose to avoid—or at a minimum to reduce the frequency of their participation in—such conduct.

The critical problem is obvious. Neither labeling nor deterrence theorists view sanctions as a neutral influence. They both, however, advance totally opposite predictions regarding how sanctions shape behavior. Clearly, then, only one of the three basic hypotheses is viable: (1) sanctions increase the likelihood of proscribed behavior (i.e., labeling theory), (2) sanctions decrease the likelihood of proscribed behavior (i.e., deterrence theory), or (3) advocates of these models have been so zealous in making their respective cases that they have become more concerned with winning a largely rhetorical battle than with fashioning properly qualified and limited explanatory theories.

Unfortunately, the present state of empirical research is such that choosing between the labeling and deterrence theory requires more of a leap of faith than a prudent decision based upon a balanced consideration of empirical evidence. This is the case for several reasons. First, the available empirical research typically evaluates propositions derived from one rather than both of these contradictory perspectives and is thus uninformative regarding the basic contradiction described above.

Second, research associated with labeling theory most commonly has addressed that portion of the theory which seeks to account for differential attributions of potentially stigmatizing labels rather than whether labeling processes have any implications for future conduct. Deterrence research, on the other hand, most often

has concentrated on how general rates of formal reactions (e.g., arrest or conviction probabilities) are correlated with rates of those behaviors which prompt formal reactions. Such research efforts reveal little if anything about the viability of the deterrence model.¹ The model, after all, reflects a social psychological viewpoint that has never hypothesized a linkage of any kind between rates of reaction and rates of behavior. It only hypothesizes an inverse correlation between perceptions of sanction risk and crime. The presence or absence of any type of correlation between aggregate sanction rates and behavior rates, therefore, is largely irrelevant to deterrence theory.² Finally, tests of these models present us with major methodological problems. The social psychological processes that are central to both models are such that neither can be evaluated adequately without longitudinal data.³ While it is true that longitudinal data create a host of statistical difficulties for which no satisfactory resolution presently exists,⁴ only a nihilist would suggest a move from the potentially deceptive light provided by such data to the impossible darkness of cross-sectional designs when processual models are to be tested.

Although this research will not resolve all of the problems that

¹ For a general discussion of these as well as other related concerns, see A. BLUMSTEIN, J. COHEN & D. NAGIN, *DETERRENCE AND INCAPACITATION: ESTIMATING THE EFFECTS OF CRIMINAL SANCTIONS ON CRIME RATES* (1978); J. GIBBS, *CRIME, PUNISHMENT, AND DETERRENCE* (1975); F. ZIMRING & G. HAWKINS, *DETERRENCE: THE LEGAL THREAT IN CRIME CONTROL* (1973); Erickson & Gibbs, *Objective and Perceptual Properties of Legal Punishment and the Deterrence Doctrine*, 25 *SOC. PROBS.* 253 (1978); Geerken & Gove, *Deterrence, Overload and Incapacitation: An Empirical Evaluation*, 56 *SOC. FORCES* 424 (1977).

² On a purely intuitive level, it might appear that rates of crime and delinquency would diminish when rates of arrest, trial, conviction, and so on move higher—assuming, of course, that one was relying on the intuitions of deterrence theorists. As is indicated in the text, however, the core of the deterrence theory hypothesis is that reactions to unlawful conduct alter perceptions of risk among those who are the objects of such reactions (i.e., specific deterrence) and those who witness reactions being directed against others (i.e., general deterrence). It is these elevated perceptions of risk rather than reactions to unlawful conduct that are said to be inversely associated with the subsequent incidence of unlawful behavior. There is no prediction of a direct linkage between rates of reaction and rates of behavior.

³ See J. GIBBS, *supra* note 1; Paternoster, Saltzman, Chiricos & Waldo, *Deterrent and Experiential Effects: The Problem of Causal Order in Perceptual Deterrence Research*, 73 *J. CRIM. L. & CRIMINOLOGY* 1238, 1249-50 (1982).

⁴ See R. KESSLER & D. GREENBERG, *LINEAR PANEL ANALYSIS* (1981); Bohrnstedt, *Observations on the Measurement of Change*, in *SOCIOLOGICAL METHODOLOGY* 113 (E. Borgatta ed. 1969); Duncan, *Some Linear Models for Two-Wave, Two-Variable Panel Analysis*, 72 *PSYCHOLOGICAL BULL.* 177 (1969); Duncan, *Testing Key Hypotheses in Panel Analysis*, in *SOCIOLOGICAL METHODOLOGY* 279 (K. Schuessler ed. 1980); Joreskog & Sorbom, *Statistical Models and Methods for Analysis of Longitudinal Data*, in *LATENT VARIABLES IN SOCIOMETRIC MODELS* 285 (D. Aigner & A. Goldberger eds. 1977); Wiley & Wiley, *The Estimation of Measurement Error in Panel Data*, 35 *Am. Soc. Rev.* 112 (1970).

stem from the contradictory assertions of labeling and deterrence theories, a step or two in that direction will be taken. Specifically, this Article will report on a large two-wave panel design from which measures of crucial labeling and deterrence theory variables were obtained. With respect to the labeling model, this Article will examine how formal and informal sanctions relate to subsequent delinquent self-conceptions and delinquency involvement. With respect to the deterrence model, this Article will analyze how those same sanctions influence subsequent perceptions of sanction risk as well as delinquency involvement.

II. CONCEPTUAL BACKGROUND FOR THE ANALYSIS

A recapitulation of the history and development of labeling and deterrence models is unnecessary. Thorough discussions of both are readily available elsewhere.⁵ A consideration of those aspects of the two models that are of special relevance to this research is nevertheless necessary.

A. LABELING THEORY

We must begin by noting that there really is no such thing as a "pure" labeling theory. The intellectual roots of the model are so diverse that multiple labeling models have developed in a relatively unintegrated fashion. Indications of what was to develop via the contributions of such figures as Becker,⁶ Kitsuse,⁷ Erikson,⁸ and others can be found in the much earlier writings of such otherwise dissimilar persons as Tarde,⁹ Durkheim,¹⁰ Meade,¹¹ and Tannenbaum.¹² Because of these divergent historical foundations, one can

⁵ See N. DAVIS, *SOCIOLOGICAL CONSTRUCTIONS OF DEVIANCE: PERSPECTIVES AND ISSUES IN THE FIELD* (1975); D. GIBBONS, *THE CRIMINOLOGICAL ENTERPRISE* (1979); J. GIBBS, *supra* note 1; W. GOVE, *THE LABELLING OF DEVIANCE: EVALUATING A PERSPECTIVE* (1975); R. HAWKINS & G. TIEDEMAN, *THE CREATION OF DEVIANCE: INTERPERSONAL AND ORGANIZATIONAL DETERMINANTS* (1975); A. LISKA, *PERSPECTIVES ON DEVIANCE* (1981); I. TAYLOR, P. WALTON & J. YOUNG, *THE NEW CRIMINOLOGY: FOR A SOCIAL THEORY OF DEVIANCE* (1973); *THEORETICAL PERSPECTIVES ON DEVIANCE* (R. Scott & J. Douglas eds. 1972).

⁶ H. BECKER, *OUTSIDERS: STUDIES IN THE SOCIOLOGY OF DEVIANCE* (1963); *THE OTHER SIDE: PERSPECTIVES ON DEVIANCE* (H. Becker ed. 1964).

⁷ Kitsuse, *Societal Reaction to Deviant Behavior: Problems of Theory and Method*, 9 *SOC. PROBS.* 247 (1962).

⁸ K. ERIKSON, *WAYWARD PURITANS* (1966).

⁹ G. TARDE, *THE LAWS OF IMITATION* (2d ed. 1895).

¹⁰ E. DURKHEIM, *THE DIVISION OF LABOR IN SOCIETY* (1964) [originally published in 1893].

¹¹ G. MEAD, *MIND, SELF, AND SOCIETY* (1934); Mead, *The Psychology of Punitive Justice*, 23 *Am. J. Soc.* 577 (1918).

¹² F. TANNENBAUM, *CRIME AND THE COMMUNITY* (1938).

now identify many versions of labeling theory (e.g., a functionalist version, a learning theory version, a symbolic interactionist version, a conflict version, etc.).

Second, the dual focus of labeling theory also must be recognized. The concern that has stimulated the greater volume of empirical research involves the social and legal processes by which potentially stigmatizing labels are attributed to individual actors—the “*processes by which persons come to be defined as deviant by others.*”¹³ Those interested in this feature of labeling theory quite properly assert that such definitions are often linked to variables that are independent of any particular kind of conduct (e.g., age, gender, race, economic or political power of actors, and—when acts have identifiable victims—a broad range of victim characteristics and preferences). Beyond this sociology of law concern, however, is the critically important “so what” question. Quite apart from considerations of equity, justice, and reasonableness in the application of stigmatizing labels, all versions of labeling theory advance hypotheses regarding the way in which labeling will affect the subsequent attitudes, values, self-conceptions, and behavior of those who are singled out for special attention.

Only the “so what” question will be addressed here. Try as they often have, labeling theorists simply cannot avoid one inescapable conclusion that is central to all they have tried to say: *The attribution of stigmatizing labels, particularly when that attribution process involves formal agents of social control, initiates a social process that results in altered self-conceptions, a reduction in the availability of conventional opportunities, a restructuring of interpersonal relationships, and an elevated likelihood of involvement in the real or imagined conduct which stimulated initial intervention efforts.* This fundamental conclusion runs throughout the labeling literature. Tannenbaum, for example, suggested that, “[t]he young delinquent becomes bad because he is defined as bad and because he is not believed if he is good.”¹⁴ Becker argued that the definition process “sets in motion several mechanisms which conspire to shape the person in the image people have of him.”¹⁵ Scheff contended that “[t]he rule-breaker is sensitive to the cues provided by these others [members of society] and begins to think of himself in terms of the stereotyped role”¹⁶ Indeed, more than a few commentators have come very close to claiming that societal reactions are a necessary condition for systematic or career

¹³ Kitsuse, *supra* note 7, at 248 (emphasis in original).

¹⁴ F. TANNENBAUM, *supra* note 12, at 17-18.

¹⁵ H. BECKER, *supra* note 6, at 34.

¹⁶ T. SCHEFF, *BEING MENTALLY ILL: A SOCIOLOGICAL THEORY* 88 (1966).

deviance. Lemert, for example, suggested that "[i]t is seldom that one deviant act will provoke a sufficiently strong societal reaction to bring about secondary deviation [I]n the absence of reactions . . . it is questionable whether a transition to secondary deviation would take place."¹⁷

B. DETERRENCE THEORY

Those associated with the development of deterrence theory are unpersuaded by the theoretical logic of their competitors. Their contrary views on the probable consequences of sanctions stem in large part from their very different image of conventional as well as non-conventional actors. Reduced to its fundamentals, at least from the point of view of the deterrence theorist, labeling theory describes individuals as persons who are driven in one direction or another by the reactions accorded them by others rather than as persons who play an active role via their ability to choose between alternative courses of action. The comic "the devil made me do it" aphorism clearly does creep into many statements of labeling theorists. The theory is that people are what they have become largely by virtue of others having defined them in some favorable or unfavorable fashion.

The underpinnings of deterrence theory are far different. The rationalism that was at the very core of the deterrence viewpoint when it emerged some two hundred years ago is no less evident today.¹⁸ As much as the model may have been stripped of assertions

¹⁷ Lemert, *Primary and Secondary Deviance*, in THEORIES OF DEVIANCE 167, 170 (S. Traub & C. Little eds. 1975). See also E. LEMERT, HUMAN DEVIANCE, SOCIAL PROBLEMS, AND SOCIAL CONTROL (2d ed. 1972); E. LEMERT, SOCIAL PATHOLOGY (1951).

¹⁸ The most obvious origins of deterrence theory, of course, are to be found in C. BECCARIA, ON CRIMES AND PUNISHMENT (1963) [originally published in 1764]. Beccaria's contention was that "[l]aws are the conditions under which independent and isolated men united to form a society. Weary of living in a continual state of war, and of enjoying a liberty rendered useless by the uncertainty of preserving it, they sacrificed a part so that they might enjoy the rest of it in peace and safety." *Id.* at 11. His primary emphasis was on law as a means of preventing crime rather than providing for the punishment of offenses. *Id.* at 93. "It is better to prevent crimes than to punish them. This is the ultimate end of every good legislation, which, to use the general terms for assessing the good and evils of life, is the art of leading men to the greatest possible happiness or to the least possible unhappiness." *Id.* Beccaria was convinced, however, that there is a "force, similar to gravity, which impels us to seek our own well-being [which] is restrained in its operation only to the extent that obstacles are set up against it" *Id.* at 63. He recognized that total crime prevention would always be an unobtainable goal. Just as he viewed law as a "political obstacle" that would appeal to the self-interests of amoral actors and thereby make the provisions of law an initial tool of crime prevention, he evaluated legal sanctions in terms of their future benefits rather than their ability to serve some retributive purpose. He observed, for example, that [f]or a punishment to attain its end, the evil which it inflicts has only to exceed the

about the nature of the social contact that binds us to one another and the capacity for self-determination that was once thought to originate in our "free will," the central theses remain substantially unchanged: (1) actors are neither inherently moral nor immoral, for they are motivated primarily by their perceptions of what will enhance their self-interests; (2) actors are free to choose between available alternative courses of action; and (3) actors will avoid non-normative alternatives to the extent that their perceptions of some combination of swift, certain, and harsh sanctions persuade them that such alternatives will serve their self-interests less well than will conventional alternatives.

What we have, then, are two very different social psychological conceptualizations of the role played by societal reactions to human conduct. Largely ignoring the causes of initial or exploratory acts of deviance, labeling theory imputes a good deal of power to the reactions of social control agents (e.g., teachers, school officials, police officers, the judiciary) as it attempts to explain repetitive deviance. Moreover, labeling theory is "loose" in the sense that both the intervention of and sanctions imposed by social control agents are viewed in a substantially similar manner. For example, distinctions between an arrest and a conviction are not commonly viewed as relevant, and this viewpoint has not been without qualified empirical support.¹⁹ Nonetheless, the propositions one can derive from the labeling model quite clearly anticipate that official recognition of misconduct—whether that recognition flows from accurate or inaccurate assessments of what an actor has or has not done—has the power (1) to produce conceptions of self that are consonant with the label, (2) to diminish access to conventional opportunities, and (3) to thereby increase rather than decrease the likelihood of subsequent deviance, crime, or delinquency.

Deterrence theory, while concerned with substantially similar reaction processes, largely ignores the impact of intervention and/or sanctions on self-conceptions and subsequent access to conventional opportunities. Instead, attention is focused on the power of intervention and/or sanctions to alter actors' calculations of the risks associated with non-normative conduct. Quite contrary to the propositions derived from the labeling perspective, deterrence the-

advantage derivable from the crime; in this excess of evil one should include the certainty of punishment and the loss of the good which the crime might have produced. All beyond this is superfluous and for that reason tyrannical.

Id. at 43.

¹⁹ The most frequently cited study in this regard is certainly Schwartz & Skolnick, *Two Studies of Legal Stigma*, 10 *SOC. PROBS.* 133 (1962). See generally G. HAWKINS & G. TIEDEMAN, *supra* note 5, at 241; E. LEMERT, *supra* note 17, at 62.

ory maintains that the most significant consequences of sanctions include an elevation of actors' perceptions of the risks associated with non-normative behavior and, therefore, reduced levels of involvement in such behavior.

III. THE RESEARCH PROBLEM

Based on two-wave panel data obtained from a large sample of adolescents, our analysis focuses on the consequences of sanctioning. Part of our analysis will focus on whether sanctions influence changing patterns of delinquency observed during the time period between two data collection points. With only two data collection points such a test is less than perfect.²⁰ Furthermore, while our baseline and follow-up measures permit a determination of behavioral change, a problem of causal order persists. Specifically, because our data do not include information on the exact points in time when delinquency and sanctioning occurred, we cannot differentiate between delinquent involvement that preceded the imposition of sanctions and behavior that took place after sanctions were imposed. The behavioral consequences of sanctioning are not, however, our primary concern. Inferences from prior research notwithstanding, neither increases nor decreases in levels of delinquent involvement following the imposition of sanctions provides unequivocal evidence for either the labeling or deterrence paradigms. This fact has been overlooked too often in the empirical literature. While such evidence would be consistent with one or the other of these theories, it also would be consistent with numerous other interpretations.

This Article's primary focus, then, will be on those intervening processes specified by the two models. Because labeling theorists view movement from exploratory to systematic or repetitive deviance as being contingent upon the attribution of stigmatizing labels, and because those labels are presumed to have that consequence largely because they significantly influence actors' self-conceptions, the question of whether the imposition of sanctions actually results in a reassessment of self that is consistent with the deviant label will be evaluated. In particular, this Article will explore whether juveniles labeled as troublemakers or delinquents come to see themselves in terms of this stigmatized status. Second, because the deterrence theorists contend that sanctions influence behavior through the intervening impact of sanctions on perceptions of the

²⁰ For a discussion of the imperfections in tests with only two data collection points, see R. KESSLER & D. GREENBERG, *supra* note 4 at 181-82.

risk of punishment, this Article will attempt to determine whether the imposition of sanctions is followed by elevated perceptions of the risk of sanctions.

Fortunately, data collected at two points in time permit a clean assessment of these propositions. Perceptions of self and of the risk of sanctions were measured by both data collection points, thus allowing a measurement of changing values on these very important variables. The changes can be correlated with sanctions imposed between the two data collection points. If sanctions elevate perceptions of risk, a central proposition of the deterrence model would be supported. By the same logic, if sanctions increase the extent to which those in the sample adopt delinquent evaluation of self, then a very important assertion of labeling theory would be supported.

IV. METHODOLOGY

Data were obtained from junior and senior high school students at thirteen schools in Virginia Beach, Virginia and nine schools in the adjacent city of Portsmouth, Virginia. A cluster sampling procedure was employed, the basic sampling units consisting of classes required of all students at each grade level in each of the schools. Two such classes were randomly selected from each grade level at every junior and senior high school in the two cities.

The data collection method called for the administration of a questionnaire at both the beginning and end of a single academic year. Seventy-four percent of those responding to the fall questionnaire also completed the spring survey ($N = 2,249$). An inspection of the completed questionnaires revealed a need to delete some cases for such commonly encountered problems as substantial non-response to key items and evidence of haphazard responses. Consequently, the final sample size was 2,147.

A review of the social and demographic characteristics of those in our final sample reveals nothing to suggest that the sample is not representative of the population from which it was drawn. Naturally, however, no claim is made of a purely random sample. No way exists to determine what the data would have shown were, for example, all respondents to have completed the instruments properly at both data collection points. Fifty-three percent of the respondents are female, seventy-five percent are white, the median age of the sample is slightly greater than fifteen, and, largely as a consequence of the relatively affluent population of Virginia Beach, the distribution of scores on a measure of parental occupation prestige indicates that our respondents came from somewhat higher

socioeconomic categories than might be found in some areas. The operational measures of the primary independent and dependent variables are described below.

A. DELINQUENCY INVOLVEMENT

The measurement of delinquency has posed a major problem for those involved in self-report surveys over the more than forty years during which that method has been in use. Among the several issues that have concerned researchers are problems related to the reliance on cross-sectional designs (which often present impossible difficulties in terms of establishing the causal ordering of variables), an untenable lack of specificity regarding the time period referenced by questionnaire or interview items, and distortions produced by self-report inventories within which peccadilloes are emphasized to the exclusion of more serious offenses.²¹

In this study such difficulties are minimized by adopting a longitudinal design, making the reference period for the delinquency items specific (i.e., offenses committed during the twelve month period prior to the initial data collection point and those committed between the two questionnaire administrations), and by including a balanced set of serious as well as non-serious offenses. With regard to the last concern, a thirteen-item delinquency inventory included relatively trivial though common offenses, all of which were "chargeable" at the time the instrument was administered (truancy, theft of items valued at two dollars or less, use of a false identification card, and purchase of alcohol), moderately serious offenses (theft of items valued at between two and fifty dollars, running away from home, simple assault, vandalism, and unauthorized use of automobiles), and serious offenses (grand theft, breaking and entering, auto theft, and assault with a weapon). Further, and consistent with the important work recently reported by Hindelang,²² a variety of scaling methods were tried (i.e., unweighted frequency scores, weighted frequency scores, composite frequency-severity scores, overall scale scores, sub-scale scores, variety scores, etc.). As did Hindelang, a simple variety score was utilized, but similar results were obtained when alternative operationalizations were employed. Such scores provide an index of the number of different kinds of delinquent acts reported by the respondents during the two time

²¹ M. HINDELANG, T. HIRSCHI & J. WEISS, *MEASURING DELINQUENCY* (1981); G. NETTLER, *EXPLAINING CRIME* 86 (3d ed. 1984); C. THOMAS & J. HEPBURN, *CRIME, CRIMINAL LAW, AND CRIMINOLOGY* 105-15 (1983).

²² M. HINDELANG, *supra* note 21.

periods covered by the survey.²³ Scores on the two delinquency measures ranged from a low of zero (no reported delinquency) to a high of thirteen (one or more reported involvements in all thirteen acts). The baseline mean score was 4.10 with a standard deviation of 2.66; the follow-up mean score was 3.23 with a standard deviation of 2.36.

B. DELINQUENT SELF-CONCEPT

Much research has addressed the connection between delinquency involvement and such variables as self-concept and self-esteem.²⁴ Support for hypotheses linking these variables to juvenile

²³ Notwithstanding the fact that variety score methods may correlate highly with alternative methods that attribute more importance to the frequency and/or the seriousness of self-reported involvement in juvenile delinquency or other forms of behavior, it should be understood that they provide an index of the scope rather than the frequency or seriousness of involvement in the behavior being examined. Such measures ignore altogether the possibility that particular respondents may routinely engage in a very small number of activities included in a self-report inventory and the potential relevance of distinctions between serious and non-serious offenses. At the extreme, for example, a respondent to our inventory who regularly engaged in a single serious type of unlawful conduct (e.g., auto theft, grand larceny, assault with a weapon, or breaking and entering), but who avoided all other types of behavior addressed by our thirteen-item self-report inventory would have received a delinquency involvement score of only one. A good deal of delinquency research suggests, however, that juveniles seldom specialize in a single type of misconduct. Indeed, the failure of criminological research to identify stable patterns of criminal involvement among adults has led many criminologists to dismiss the once popular "behavior systems" approach.

If there is a pattern to delinquency, it may be reflected by those who commit especially serious delinquent acts tending to report involvement in a wide variety of other serious as well as non-serious offenses and for serious offenders to report more frequent delinquency involvement. To the extent that this is the case, variety scores of the type we have relied upon should be satisfactory. See, e.g., S. AGETON & D. ELLIOTT, *THE INCIDENCE OF DELINQUENT BEHAVIOR IN A NATIONAL PROBABILITY SAMPLE* (1978); M. HINDELANG, *supra* note 21; M. WOLFGANG, R. FIGLIO & T. SELLIN, *DELINQUENCY IN A BIRTH COHORT* (1972); Hindelang, *Age, Sex, and the Versatility of Delinquent Involvements*, 18 *SOC. PROBS.* 522 (1971); Thomas, *Are Status Offenders Really So Different?*, 22 *CRIME & DELINQ.* 438 (1976).

Commenting on this literature, Empey recently observed that "[o]n one end of the continuum are the majority of young people, most of whom have committed a number of minor acts, although an occasional serious offense may appear. Further along the continuum, one encounters fewer and fewer juveniles who, at the same time, tend to be more and more delinquent. Their illegal acts tend to increase not only in frequency but in seriousness." L. EMPEY, *AMERICAN DELINQUENCY: ITS MEANING AND CONSTRUCTION* 112 (rev. ed. 1982). How to best operationalize concepts like delinquency involvement, however, continues to present a question for which no acceptable answers exist. Indeed, we are in disagreement on this topic. The senior author has serious reservations about the logical reasonableness and validity of variety scores; the junior author is considerably more enthusiastic in her assessment of the technique.

²⁴ H. KAPLAN, *DEVIANC BEHAVIOR IN DEFENSE OF SELF* (1980); M. ROSENBERG, *SOCIETY AND THE ADOLESCENT SELF-IMAGE* (1965); Orcutt, *Self-Concept and Insulation Against Delinquency*, 11 *SOC. Q.* 381 (1970); Rosenberg & Rosenberg, *Self-Esteem and Delinquency*, 7

delinquency has been mixed. Recently, for example, Wells and Rankin concluded that "the causal relation between self-esteem and delinquency does not routinely exist"²⁵ The bulk of prior research, however, has little relevance to the issues raised here. Most of it stems from a control theory-based hypothesis that positive assessments of self will inhibit delinquency. Labeling theorists, however, have little to say about whether stigmatization will affect conceptions of self-worth. Instead, they contend that those who confront negative reactions from others will be more likely to see themselves from the vantage point of those others (i.e., they will come to think of themselves as deviant, delinquent, or criminal). Obviously, one could think of oneself as a delinquent without any need for that self-conception to either elevate or diminish self-esteem.

Factor analytic procedures were employed to construct a delinquent self-concept scale that contained identical items in the baseline and follow-up data. One example of the items in this scale should be sufficient to illustrate the overall content of the measure: "Anybody who thinks I'm a bad person or a delinquent is just wrong." Scores on this three-item Likert-type scale ranged from 3 (low delinquent self-concept) to 15 (high delinquent self-concept). The initial measure has a mean of 6.74 and a standard deviation of 2.39. The follow-up measure has a mean of 6.67 and a standard deviation of 2.49.

C. PERCEIVED CERTAINTY OF PUNISHMENT

Deterrence theorists predict that those who perceive a high likelihood of punishment will be less likely to engage in proscribed conduct than those who perceive lower levels of risk. The measure employed to gauge the perceived risk of punishment was a three-item scale and was identical at both data collection points. A representative item is: "If you're careful, I think you could break just about any law and get away with it." Scores on this scale ranged from 3 to 15. The higher the score, the greater the perceived risk of punishment. The baseline measure has a mean of 9.56 and a standard deviation of 2.32. The follow-up measure has a mean of 9.40 and a standard deviation of 2.39.

J. YOUTH & ADOLESCENCE 279 (1978); Wells & Rankin, *Self-Concept as a Mediating Factor in Delinquency*, 46 SOC. PSYCHOLOGICAL Q. 11 (1983).

²⁵ Wells & Rankin, *supra* note 24, at 21.

D. FORMAL AND INFORMAL SANCTIONS

A fairly broad definition of formal and informal sanctions is adopted in this report. It distinguishes between the reactions of representatives of the juvenile justice system (formal sanctions) and by public school officials (informal sanctions). The formal sanctions measure was based on self-reported contacts with the police or with juvenile court authorities. The informal sanctions measure reflected self-reported frequencies of being "thrown out of a classroom" or suspended from school. Both measures were dichotomized. Any official reaction between the two data collection points received a score of 1; no official contact was assigned a score of zero. Three hundred and eighty-six respondents, or 18 percent of the sample, reported at least one contact with police or court officials over the course of the study period. Seven hundred and thirty students, or 34 percent of the sample, reported reactions by school authorities.

V. ANALYSIS

The initial task was to determine whether or not sanctioning is associated with changing levels of delinquent involvement. Both the labeling and deterrence perspectives assume that it is, but each theory makes different predictions regarding the effect of sanctions. Because behavioral change was measured, initial delinquency involvement was also considered. What we did not wish to examine was delinquency that is merely a continuation of an already established behavioral pattern, a pattern that could be interpreted purely in terms of projecting levels of delinquent involvement at Time₂ from levels of delinquent involvement observed at Time₁. By taking the baseline measure of delinquency into account, an assessment of the relation between sanctioning and changes in delinquency involvement over the study period becomes possible.

The analysis of change in terms of difference scores employs a variation of the conventional regression analysis suggested by Kessler and Greenberg.²⁶ The change in delinquency for each individual can be expressed in terms of the following equation: $D = D_2 - D_1 = a + (b_1 - 1) D_1 + b_2 F + b_3 I + e$. D refers to change in delinquency, D_2 refers to the Time₂ measure of delinquency, D_1 refers to the baseline measure of delinquency, F refers to the measure of formal sanctioning, I refers to the measure of informal sanctioning, and e is an error term. The use of change scores distinguishes that portion of Time₂ delinquency that could have been predicted

²⁶ R. KESSLER & D. GREENBERG, *supra* note 4.

purely on the basis of past delinquency from that which is due to the influence of sanctions. The prior measure of the dependent variable is included among the regressors and serves as an instrument for clarifying the regression of subsequent delinquency (Time_2) on sanctioning.²⁷ The results of this analysis are reported in Table 1.

Looking at the results in Table 2, the model provides the following prediction equation for Time_2 delinquency: $D_2 = .97 + .40D_1 + 1.32F + 1.10I$. Because the quantity $(b_1 - 1) D_1$ equals $-.60$, we conclude that initial level of delinquency has a negative effect on changing patterns of delinquency. Because the average self-reported delinquency scores for those in the sample were relatively stable over time with regard to measures of both central tendency (Time_1 and Time_2 means were 4.10 and 3.23 respectively) and dispersion (Time_1 standard deviation equals 2.66, Time_2 standard deviation equals 2.36), this negative coefficient may well reflect what amounts to a regression toward the mean effect. In other words, those with very low and very high self-reported delinquency scores may simply have moved toward more typical patterns of delinquency involvement.²⁸ Because the sign of the unstandardized regression coefficient for D_1 is positive ($b = .40$), however, those with high levels of initial involvement continued to report more delinquent activity than those who at Time_1 had little involvement.

More importantly, both formal and informal sanctions are significantly related to changing levels of delinquency involvement.²⁹ Regardless of whether the importance of formal and informal sanctions are assessed by focusing on the magnitude of the regression coefficients, the R^2 change associated with the entry of the sanction variables into the regression equation (formal and informal sanctions produce 6 and 4 percent increments in the explained

²⁷ To obtain the effect of Time_1 delinquency on change in delinquency, subtract one from the partial regression coefficient representing the effect of Time_1 delinquency on Time_2 delinquency with sanctioning held constant.

²⁸ This interpretation is supported further when it is recognized that the time periods covered by the baseline and follow-up questionnaire are not equal. At Time_1 respondents were asked to report on their delinquency involvement during the previous year. At Time_2 , however, they were asked to report on their delinquency involvement since the Time_1 questionnaire was completed (i.e., a period of roughly eight months covered by the Time_2 questionnaire versus twelve months by the Time_1 questionnaire).

²⁹ Care should be taken in interpreting our use of terms such as significant. While our sampling method was random, it would be inappropriate to refer to the final sample as a random sample. For example, 26 percent of those in our Time_1 sample did not reappear in our Time_2 sample, and those absent from school at one or both data collection points may or may not have been similar to those from whom data were obtained. Tests of statistical significance, therefore, would be inappropriate. In this analysis, significance will refer to variables whose inclusion in the regression analysis added to the percentage of explained variance by at least 1 percent.

TABLE 1
REGRESSION ANALYSIS OF TIME₂ DELINQUENCY

Predictor Variable	R ²	R ² Change	Unstandardized Coefficient	Standardized Coefficient
Time ₁ Delinquency	.34	.34	.40	.46
Formal Sanctions	.40	.06	1.32	.22
Informal Sanctions	.44	.04	1.10	.22

TABLE 2
ZERO-ORDER INTERCORRELATION MATRIX*

	X ₁	X ₂	X ₃	X ₄	X ₅	X ₆	X ₇	X ₈
X ₁	1.000							
X ₂	.580	1.000						
X ₃	-.309	-.286	1.000					
X ₄	-.238	-.318	.465	1.000				
X ₅	.406	.385	-.210	-.180	1.000			
X ₆	.357	.474	-.193	-.248	.436	1.000		
X ₇	.274	.401	-.155	-.150	.287	.290	1.000	
X ₈	.297	.410	-.145	-.167	.239	.321	.265	1.000
Means:	4.10	3.23	9.56	9.40	6.74	6.67	.34	.18
Standard Deviation:	2.66	2.35	2.32	2.39	2.38	2.49	.47	.38

* X₁ = Time₁ Delinquency X₂ = Time₂ Delinquency X₃ = Time₁ Risk Perception X₄ = Time₂ Risk Perception X₅ = Time₁ Delinquent Self-Concept X₆ = Time₂ Delinquent Self-Concept X₇ = Formal Sanctions X₈ = Informal Sanctions

variance), or the proportion of the total variance that is uniquely attributable to the effect of sanctions (nearly one quarter of the explained variance), the conclusion is the same. Both types of sanctions are associated with increasing levels of delinquency. Unfortunately, it is not possible to draw any causal inferences from these findings. The temporal order of sanctioning and delinquent behavior cannot be established. As predicted by labeling theorists, it could be that sanctioning promotes further delinquency. It is at least equally possible, however, that increases in delinquency involvement are followed by higher probabilities of sanctioning.

A better test of the two models is provided by focusing on the intervening mechanisms by which sanctions are expected to effect subsequent behavior. To begin with, if labeling theory is correct, then sanctions between Time₁ and Time₂ should promote increased delinquent identification. Because delinquent self-concept was measured prior to and after the period during which sanctions were imposed, the time ordering of the variables can be established unambiguously. By the same token, if proponents of deterrence theory are correct, sanctioning should result in increases in perceptions of the certainty of punishment. These perceptions also were measured at two unambiguous time points, so that the impact of sanctioning on changes in perceptions of punishment risk can also be assessed in a straight-forward fashion.

First, the specific deterrence proposition is examined. The test involves an examination of the effect of sanctioning that took place between Time₁ and Time₂ on perceptions of the certainty of punishment. Because the interest is in measuring perceptual change, we again must take account of the baseline measure. Furthermore, because initial involvement in delinquency is related to Time₁ perceptions of risk ($r = -.31$) and to formal and informal sanctioning ($r = .40$ and $.41$, respectively), delinquent behavior that took place between Time₁ and Time₂ must be considered as well. The equation to be solved is thus: $P = P_2 - P_1 = a + (b_1 - 1)P_1 + b_2D_2 + b_3F + b_4I + e$. P_1 and P_2 refer to the Time₁ and Time₂ measures of risk perceptions and the remaining symbols have the same referents described earlier. The results of the analysis are presented in Table 3.

The equation for Time₂ risk perceptions is $P_2 = 6.05 + .42P_1 - .18F - .16I$. Thus, those with high initial risk perceptions tend to persist in their belief that the risk of reaction is high ($r = .47$). Because the quantity $(b - 1)P_1$ is $-.58$, however, we encounter a finding similar to that noted earlier regarding the delinquency variable. Those with very low initial perceptions of risk appear to have adopted higher assessments of risk and those with high initial per-

TABLE 3
REGRESSION ANALYSIS OF TIME₂ PERCEPTIONS OF THE CERTAINTY OF PUNISHMENT

Predictor Variable	R ²	R ² Change	Unstandardized Coefficient	Standardized Coefficient
Time ₁ Perceptions of Certainty	.22	.22	.42	.41
Time ₂ Delinquency	.25	.03	-.19	-.19
Formal Sanctions	.25	.00	-.18	-.03
Informal Sanctions	.25	.00	-.16	.00

TABLE 4
REGRESSION ANALYSIS OF TIME₂ DELINQUENT SELF-CONCEPTIONS

Predictor Variable	R ²	R ² Change	Unstandardized Coefficient	Standardized Coefficient
Time ₁ Self-Conception	.19	.19	.29	.28
Time ₂ Delinquency	.31	.11	.31	.29
Formal Sanctions	.31	.01	.76	.12
Informal Sanctions	.31	.00	.32	.06

ceptions of risk moved in the opposite direction. Furthermore, involvement in delinquent behavior significantly reduces perceptions of the certainty of punishment. Of greater interest are the findings reported in Table 3 that indicate that neither formal nor informal sanctions affects perceptions of risk significantly. This is flatly contrary to the specific deterrence hypothesis. Nevertheless, the regression coefficients for both sanctioning variables are small, and the introduction of these variables into the equation produces no meaningful change in the explained variance.

An examination of the effects of sanctioning on changes in delinquent self-conceptions is also informative. An identical analytical procedure to the one described above (i.e., the baseline and follow-up measures of the dependent variable as well as the Time₂ measure of delinquency and the two sanctioning variables) are included in the model. The results are presented in Table 4.

The test of this model yielded the following results: $S_2 = 3.47 + .29S_1 + .31D_2 + .76F + .32I$. S_1 and S_2 refer to the Time₁ and Time₂ measures of delinquent self-conceptions. The other symbols have the same referents described above. The findings are consistent with the notion that those who initially view themselves as delinquent tend to persist in that view ($r = .44$). A trend toward a moderation of views over time, however, may be discerned from the sign of the quantity $(b_1 - 1)S_1$, which reflects the effect of initial conceptions of self on changing self-conceptions. Moreover, independent of the effect of initial levels of delinquent identification, delinquent involvement has a substantial impact on the way the respondents view themselves. The introduction of delinquency into the model, for example, increases the explained variance by 11 percent. Thus, the broader the scope of delinquent involvements, the more likely juveniles were to define themselves as delinquent. Finally, the data indicate that, independent of delinquent activity, only formal sanctioning is associated with increased self identification as delinquent. Even there the inclusion of the formal sanction variable adds only 1 percent to the variance explained.

Elaborating the Analysis: Some commentators have proposed that the impact of sanctioning may be contingent on the point in the "delinquent career" at which it is applied. Findings like those reported above may be discounted on the grounds that they mask real deterrent or labeling effects by failing to consider relevant dimensions of experience. Both labeling and deterrence theorists sometimes maintain that the individuals of whom they speak are largely those for whom violations of the law are novel. Some research supports this view. For example, Cameron uncovered evidence

TABLE 5
SUMMARY OF MULTIPLE REGRESSION ANALYSIS OF TIME₂ DELINQUENT INVOLVEMENT BY SCOPE OF PRIOR DELINQUENCY

Predictor Variable	0-1 TYPES OF PRIOR OFFENSES				2-3 TYPES OF PRIOR OFFENSES				4 OR MORE TYPES OF PRIOR OFFENSES			
	R ²	b	Beta	r	R ²	b	Beta	r	R ²	b	Beta	r
Time ₁ Delinquency	.01	.07	.06	.08	.01	.24	.06	.07	.18	.39	.32	.42
Formal Sanctions	.11	.15	.26	.33	.11	.13	.26	.32	.24	.13	.23	.35
Informal Sanctions	.18	.98	.27	.34	.17	.10	.25	.32	.30	.12	.24	.35
					R ² Change				R ² Change			
					.01	.06			.18	.05		
					.11	.10			.24	.07		
					.17	.06			.30	.05		

TABLE 6
SUMMARY OF MULTIPLE REGRESSION ANALYSIS OF TIME₂ PERCEPTIONS OF THE CERTAINTY OF PUNISHMENT BY SCOPE OF PRIOR DELINQUENCY

Predictor Variable	0-1 TYPES OF PRIOR OFFENSES				2-3 TYPES OF PRIOR OFFENSES				4 OR MORE TYPES OF PRIOR OFFENSES			
	R ²	b	Beta	r	R ²	b	Beta	r	R ²	b	Beta	r
Time Certainty	.16	.38	.36	.40	.19	.44	.42	.44	.21	.41	.43	.46
Time Delinquency	.20	-.25	-.16	-.25	.02	-.13	-.11	-.18	.26	-.21	-.22	-.30
Formal Sanctions	.20	-.24	-.03	-.13	.21	-.19	-.03	-.09	.26	-.17	-.03	-.14
Informal Sanctions	.20	-.39	-.07	-.17	.21	.18	.00	-.19	.26	.20	.04	-.07
					R ² Change				R ² Change			
					.16	.19			.21	.21		
					.20	.02			.26	.04		
					.21	.00			.26	.00		
					.21	.00			.26	.00		

TABLE 7
SUMMARY OF MULTIPLE REGRESSION ANALYSIS OF TIME₂ DELINQUENCY SELF-CONCEPTIONS BY SCOPE
OF PRIOR DELINQUENCY

Predictor Variable	0-1 TYPES OF PRIOR OFFENSES					2-3 TYPES OF PRIOR OFFENSES					4 OR MORE TYPES OF PRIOR OFFENSES				
	R^2	$\frac{R^2}{\text{Change}}$	\bar{b}	Beta	\bar{r}	R^2	$\frac{R^2}{\text{Change}}$	\bar{b}	Beta	\bar{r}	R^2	$\frac{R^2}{\text{Change}}$	\bar{b}	Beta	\bar{r}
Time ₁ Delinquent Self-Concept	.09	.09	.23	.22	.29	.13	.13	.31	.29	.35	.18	.18	.30	.28	.43
Time ₂ Delinquency	.16	.07	.34	.21	.32	.19	.06	.25	.21	.32	.28	.11	.29	.30	.46
Formal Sanctions	.17	.01	.84	.10	.21	.20	.01	.64	.10	.20	.31	.02	.78	.14	.33
Informal Sanctions	.18	.01	.56	.10	.25	.20	.00	.21	.04	.20	.31	.00	.25	.05	.24

suggesting that sanctioning is most efficacious in curtailing the deviance of those who are just beginning to experiment with criminality.³⁰ Unfortunately, her research did not inquire into the effect of sanctions on perceptions of risk, so her findings do not provide unequivocal support for the deterrence model. As far as labeling theory is concerned, Jensen's research suggested that the imposition of sanctions early in a "career" is much more powerful in producing a deviant identity than is the imposition of sanctions after a pattern of deviant behavior is already well established.³¹ Among those heavily involved in delinquent behavior, differences between the labeled and the unlabeled were very slight.³² In view of these findings, we categorized the sample into those who at Time₁ reported at most one prior type delinquency (N = 716), those reporting 2 - 3 offenses (N = 637), and those reporting 4 or more offenses (N = 794). The earlier analyses of these three sub-samples were then repeated.

The results of this portion of the analysis are presented in Tables 5, 6 and 7. No marked differences between these and previously reported findings materialized. Specifically, the effect of the sanctions variables on perceptions of the certainty of punishment is inconsequential, and the effect of sanctions on self-identification or delinquent, while significant, are quite modest. Thus, this elaboration of the analysis provides no support for an important deterrence theory hypothesis and only weak support for a major labeling theory hypothesis.

VI. SUMMARY AND CONCLUSIONS

The primary objective of the research reported in this Article has been to provide a comparative assessment of selected hypotheses derived from labeling and deterrence theory that advance contradictory predictions regarding the influence of sanctions on the subsequent attitudes and behavior of those who are the object of sanctioning. Labeling theorists contend that because sanctions modify the self-conceptions of and opportunities available to those

³⁰ M. CAMERON, *THE BOOSTER AND THE SNITCH: DEPARTMENT STORE SHOPLIFTING* (1964).

³¹ Jensen, *Crime Doesn't Pay: Correlates of a Shared Misunderstanding*, 17 *SOC. PROBS.* 189 (1969). See also Claster, *Comparisons of Risk Perceptions Between Delinquents and Non-Delinquents*, 58 *J. CRIM. L., CRIMINOLOGY & POL. SCI.* 80 (1967); Minor & Harry, *Deterrent and Experiential Effects in Perceptual Deterrence Research*, 19 *J. RESEARCH CRIME & DELINQ.* 190, 200 (1982); Title & Logan, *Sanctions and Deviance: Evidence and Remaining Questions*, 7 *L. & SOC'Y REV.* 371 (1973).

³² See Hepburn, *The Impact of Police Intervention upon Juvenile Delinquents*, 15 *Criminology* 235, 255-57 (1977).

who are sanctioned, we should anticipate elevated rather than diminished levels of deviant or unlawful conduct. These theorists leave us with an image of sanctioned actors as persons who are driven toward more frequent and perhaps more serious misconduct by forces over which they have little or no control. Deterrence theorists advance a contrary prediction asserting that sanctions will elevate perceptions of risk and thereby diminish the attractiveness and likelihood of involvement in prohibited behavior. A reading of classical or contemporary deterrence theory thus leaves one with an image of actors who freely pick and choose between available behavioral alternatives purely on the basis of a desire to maximize their self-interests. While it is obvious that these expectations are conflicting, both deterrence theory and labeling theory have been very influential in transforming social and legal policies even though, somewhat ironically, little criminological research has evaluated the relative merits of either set of predictions.

The findings reported here are based on a two-wave panel design that permitted the collection of data from a randomly selected sample of 2,147 juveniles at the beginning and the end of one school year. At the first data collection point, information was obtained on self-reported delinquency involvement during the previous year via a thirteen-item self-report inventory, the degree to which respondents thought of themselves as delinquents, and the perceived certainty of punishment. At the second data collection point, information was obtained regarding delinquency involvement since the administration of the first questionnaire, a follow-up measure of both self-conceptions and perceptions of the certainty of punishment, and whether those in the sample had been the objects of informal sanctioning (i.e., sanctions imposed by school officials) or formal sanctioning (i.e., contacts with police and/or juvenile court officials) after the administration of the baseline questionnaire.

This two-wave panel design, of course, presented us with significant problems with regard to available methods of statistical analysis and the making of some types of causal inferences. In particular, because our follow-up measure of delinquency involvement and our measures of formal and informal sanctions were all taken at the same point in time, we cannot unravel the causal order between sanctions and delinquency. Delinquent acts during the school year may have followed or preceded sanctions. The ordering of the sanctions and delinquency measures relative to the follow-up measures of self-conception and perceptions of the certainty of punishment, however, is unambiguous. Furthermore, because the measures of

delinquency involvement, self-conception, and perception of risk were identical in the baseline and the follow-up questionnaires, an examination of changes in these variables as well as their absolute levels at the second data collection point was possible.

Our findings provide little support for either deterrence or labeling theory. To be sure, our data reveal substantial changes in the attitudes and behavior of those in our sample over the course of one academic year. With respect to delinquency involvement, self-conception, and perceptions of risk, for example, those with very high or very low scale scores on these variables at the first data collection point tended to have more moderate scale scores at the end of the school year. More importantly, however, the ability of formal or informal sanctions to modify delinquency involvement, self-conceptions, or perceptions of risk in the fashion predicted by either deterrence theory or labeling theory finds little or no support in our analysis. In particular, deterrence theory clearly suggests that sanctions will elevate perceptions of risk. We found that formal and informal sanctions play an inconsequential role in shaping perceptions of risk. Indeed, despite a positive relationship between involvement in delinquency and the likelihood of both formal and informal sanctions, we found that delinquency involvement tends to diminish perceptions of risk. This is hardly what is predicted by those who contend that sanctions serve the goal of specific deterrence. Similarly, while labeling theory suggests that sanctions will push actors toward an acceptance of the label which has been attributed to them, we found no such effect among those in our sample. We did find that those with relatively high levels of delinquency involvement tended to adjust their conceptions of self in a way that matched their behavior.

We conclude that some of the core assertions of labeling and deterrence theory do not survive when they are evaluated by multivariate statistical methods and in longitudinal research. Our impression is that labeling theorists attribute far more significance to sanctions imposed by formal or quasi-formal agents of social control than is attributed to them by those who are sanctioned. Deterrence theorists seem even more detached from the world in which most of the rest of us live. Apart from an archaic image of behavior reflecting little more than rational actors choosing between courses of action only after a careful though informal cost/benefit analysis, deterrence theorists hypothesize a positive relationship between sanctions and perceptions of risk of punishment that may induce actors to perceive the risk of such punishment as too great. Those who do engage in prohibited conduct have every reason to assess

the risk of punishment in more realistic terms. With regard to the vast majority of deviant and criminal activities, the realistic risk of any formal reaction is exceedingly low.

Readers certainly should be alerted to the limitations of our research. It involved only a two-wave panel design. This presents major methodological and statistical problems. In addition, the elapsed time period between the baseline and follow-up data collection points may well have been too short to permit one or more of the processes emphasized by these two theories to become influential. Other limitations exist as well. We have, for example, no measure of the effect of sanctions on real or perceived access to conventional opportunities, the frequency of sanctions, or the harshness of sanctions. Instead, we have a limited test of the two theories; a test that deals primarily with very basic hypotheses. The results of this research cannot and should not be taken as definitive evidence. The results, however, do emphasize the need for advocates of labeling and deterrence models to specify much more precisely the manner in which key concepts should be operationalized and the contexts within which sanctions will or will not produce particular kinds of effects.