Strategies and Requisites for Theoretical Integration in the Study of Crime and Deviance

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Introduction

The study of deviance and crime has traditionally been characterized by a multitude of seemingly unrelated and competitive theories. Since the 1960s the field has been dominated by the following theories: anomie, social disorganization, differential association, social control, deterrence, labeling, ethnomethodology, and conflict. To many scholars, this large number of theories has made the field seem fragmented, if not in disarray. In response to this seemingly chaotic state of affairs, numerous voices have called for theoretical integration. (Pearson and Weiner, 1985, make one of the latest in the history of such calls.)

What exactly is meant by theoretical integration is rarely made clear. To understand the meaning of the concept “integration,” the dictionary may be a useful place to start. Webster defines the infinitive verb form “to integrate” as “to bring parts together into a unified whole.” While the term “unified whole” is also not perfectly clear, especially in regard to theory, it tends to mean a relationship or order among parts. Hence, according to Webster, to integrate theories is to formulate relationships among them.

In the pages to follow, we will explore the meaning of this phrase and some of its implications for the study of crime and deviance. We will first consider the rationale for efforts at theoretical integration. What are the ostensible gains to be realized as a consequence of such an enterprise? We will then examine different strategies and directions for integration, paying attention to contrasts between strategies employed in the natural sciences and those commonly employed in the social sciences. Social scientists have used the term “integration” to refer to a much wider range of conceptual enterprises than have natural scientists. Finally, we will conclude with a few remarks on general criteria for evaluating the success of attempts to formulate integrated explanations of crime and deviance.
The Rationale for Theoretical Integration

A useful place to begin our discussion of the rationale for theoretical integration is with a clarification of the nature of the activity under investigation. There is perhaps an intuitively appealing aura surrounding the notion of theoretical integration which derives from the very terms in its name. The central role of theory in the scientific enterprise can hardly be challenged. As Collins (1986, p. 1345) reminds us, "the essence of science is precisely theory." Moreover, a good scientific theory is one that "integrates," or unifies, empirical findings. It offers, in Hempel's words, "a systematically unified account of quite diverse phenomena" (1966, p. 75). Given the positive meanings attached to both "theory" and "integration," the desirability of theoretical integration might appear to be almost self-evident.

It is important to differentiate, however, between theorizing, an activity that inherently integrates empirical findings within a general abstract framework, and theoretical integration, an activity that involves the formulation of linkages among different theoretical arguments. Theoretical integration is best viewed as one means of theorizing—i.e., as one strategy for developing more cogent explanations and for promoting theoretical growth (see especially Wagner and Berger 1985). Thus the key question to raise when considering the rationale for theoretical integration is whether or not it is, in fact, a more useful strategy for theoretical growth and development than are other strategies.

The case for theoretical integration in the field of crime and deviance has been made mainly with reference to the most prevalent alternative strategy, namely that of theory competition. Theory competition has been depicted quite favorably in the literature on the philosophy of science (e.g. Hempel 1966, pp. 25–28; Stinchcombe 1968, pp. 27–28). According to the classical model of the scientific process, theoretical development proceeds by means of the verification of theories, which involves the derivation of test implications and the evaluation of these implications with empirical observations. The acceptability of a theory increases as it successfully survives more and more tests. However, because the number of possible test implications is virtually indefinite, it is often useful to develop "crucial tests"—i.e., to derive test implications that follow from one theory but stand in contradiction to another theory. The value of such "crucial tests" lies in their efficiency and economy: the results of these tests simultaneously lend credibility to one theory while raising doubts about another (Stinchcombe 1968, pp. 27–28).

The strategy of using crucial tests to evaluate competing theories has informed a large number of studies in the literature on crime and
deviance. A couple of examples of such research should help illustrate the logic of this strategy (see Elliott 1985, p. 126, for additional citations). Jensen and Brownfield (1983) have recently examined parental attachment and drug use in an effort to assess Hirschi's social control theory in comparison with variants of social learning theory. Jensen and Brownfield argue that Hirschi's theory unambiguously predicts that attachment to parents should reduce children's drug use irrespective of the parents' own drug use. Social learning theory, in contrast, implies different associations for attachment depending on the drug use of parents. Given the contradictory nature of these predictions, the results will necessarily lend credibility to one approach while simultaneously challenging the other. In this particular study, the findings indicate that the inhibiting effect of parental attachment does vary across categories of parental drug use, thereby raising questions about certain elements of the control perspective.

A second illustration of an explicit effort at theory competition in the recent deviance literature is the research on the specific deterrent effect of arrest in cases involving domestic assault (Sherman and Berk 1984). Sherman and Berk argue that two contradictory hypotheses about the consequences of making an arrest in instances of domestic assault logically follow from the deterrence perspective and the labeling perspective. Deterrence theory implies that legal punishment will reduce the probability that the punished behavior will be repeated, whereas labeling theory implies that the stigma associated with legal punishment will actually increase this probability. The results of Sherman and Berk's field experiment reveal decreased recidivism for offenders subject to an arrest, which they interpret as supportive of the deterrence perspective over the labeling approach.

In short, the theory competition strategy has been described in the literature on the philosophy of science as an efficient and economical means of hypothesis testing, and it has informed much research and theorizing on the causes of crime and deviance. Nevertheless, criticisms of the competitive approach to theory building and verification have begun to emerge, along with calls for greater efforts at theoretical integration. Perhaps the most prominent proponent of the strategy of theoretical integration in the field of crime and deviance is Delbert Elliott (Elliott 1985; Elliott et al. 1985; Elliott et al. 1979).

Elliott expresses several reasons for dissatisfaction with the conventional strategy of theory competition. First, despite the general appeal of the notion of a crucial test, classical theories dealing with crime and deviance rarely permit the derivation of unambiguous, truly distinctive hypotheses. In fact, different theories typically predict similar outcomes,
and any given set of empirical findings can often be reconciled with various theoretical approaches (Elliott 1985, p. 125). Classical theories thus do not provide a very firm basis for devising crucial tests.

Elliott also contends that the results of allegedly crucial tests are seldom definitive. This is due in part to perennial methodological problems, such as the difficulties in developing adequate measures of key concepts. In addition, there are a number of logical problems in assuming that the acceptance of one theory necessarily entails the rejection of the rival theory (Elliott 1985, pp. 125–6).

Finally, in Elliott’s view, the explanatory power associated with theories that manage to survive the so-called crucial tests tends to be extremely weak. Elliott remarks that “the level of explained variance attributable to separate theories is embarrassingly low” (1985, p. 125). The primary reason for the poor performance of classical theories is that these theories typically involve a “single explanatory variable” (1985, p. 127). Hence, insofar as the causes of crime and deviance are multiple in nature (which seems difficult to dispute), it will be necessary to combine different theories to capture the entire range of relevant causal variables. The theory competition strategy discourages this kind of activity by forcing unproductive choices among theories. It is for these reasons, Elliott concludes, that “the competitive hypothesis approach has often seemed to inhibit theory development rather than to enhance it” (1985, p. 126).

In our view, Elliott’s arguments on behalf of theoretical integration are not always persuasive. The fact that classical theories rarely permit the derivation of unambiguous hypotheses indicates the need for greater precision in the statement of these theories. Whether or not attempts at integration will promote greater precision is an open question; however, one could reasonably argue that the goal of theoretical precision might be served just as well by further work within any given theoretical tradition.

Elliott’s observation that crucial tests of theories of crime and deviance are rarely definitive is undoubtedly accurate. However, similar statements can be made about all fields of inquiry. Indeed, as Hempel cautions in his discussion of crucial tests in the natural sciences, “even the most careful and extensive tests can neither disprove one of two hypotheses nor prove the other” (1966, p. 28). It is unrealistic, in other words, to expect definitive results in any form of hypothesis testing, and hence the lack of definitive results in competitive approaches does not in itself call for the adoption of an alternative strategy for theorizing.

Finally, the suggestion that classical theories of crime and deviance involve a single explanatory variable is somewhat overstated. While dis-
tinctive theories do tend to emphasize a certain class of variables (e.g., social controls, reinforcers, and so forth), this in no way prevents theorists from constructing accounts that involve complex interconnections of a number of variables of the type under consideration and that are thus multicausal in nature.

Despite these reservations about some of the specifics of Elliott's arguments in favor of the strategy of theoretical integration, we are sympathetic to his critical assertion that traditional theories of crime and deviance have not been very successful in explaining these phenomena. There is clearly a pressing need for theoretical development, and it seems only prudent to consider new points of departure, including concerted efforts at theoretical integration. In the section that follows, we hope to contribute to integrative theorizing by describing basic types of theoretical integration and identifying some of the critical tasks that must be confronted in order to accomplish successful integration of the various types.

Types of Integration

Some years ago Hirschi (1979) suggested that strategies or types of integration in the study of deviance and crime can be classified as one of three types: up-and-down or deductive integration, side-by-side or parallel integration, and end-to-end or sequential integration. Each type is defined by a principle that links one or more theories together. Up-and-down integration refers to identifying a level of abstraction or generality that encompasses much of the conceptualization of the constituent theories. The classical integration of the natural sciences, which involves deducing the propositions of one theory from the premises of another, is one example of this form of theoretical integration. Side-by-side (horizontal) integration refers to the partitioning of the subject matter of crime and deviance into cases that are explained by different theories. End-to-end (sequential) integration refers to specifying the temporal order between causal variables, so that the dependent variables of some theories constitute the independent variables of others.

These three types of integration can be applied equally well to micro-level, macro-level, or cross-level integration, thereby yielding a nine-cell typology defined by the principles of theoretical integration and by the levels of analysis (Table 1). For example, end-to-end integration may be illustrated at the micro level by Elliott et al.'s (1985) "integrated" theory, at the macro level by Bursik's combination of conflict and social disorganization theories (chapter 7 in this volume), and at the
cross-level by Colvin and Pauly's (1983) structural-Marxist theory. Logically, theories could exist to reflect all cells, although in practice some types are prevalent (e.g., micro-level, end-to-end integrations) whereas examples of other types are difficult to identify (e.g., cross-level, side-by-side). The present discussion will be structured around the principles of integration and some special problems posed by cross-level integration.

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<td>End-to-End (Integration)</td>
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**Side-by-Side (Horizontal) Integration**

Depending on how it is done, this type of integration may seem to be the easiest or it may not even be considered theoretical integration at all. The most common form of side-by-side integration is to partition cases of deviance and crime by the theories that best explain them. However, so that we do not end up with as many theories as cases, we must develop general criteria (principles) for partitioning the cases. Should we use characteristics of deviants, such as class, race, and gender; should we use types of crime and deviance, such as drug use, homicide, and alcoholism; or should we use both characteristics of deviants and deviance? The answer to this question can come from both theory and data. The logic of some theories seems particularly applicable to some types of deviants and deviance. For example, rational decision-making, or choice theory, may not be applicable to most homicides, especially homicides between intimates. On the other hand, it may be very applicable to corporate crime. Empirical analyses may also show that
some theories do not apply to some situations, to some categories of deviance, and to some types of deviants.

Typology construction of deviance and deviants seems to be one likely strategy of side-by-side integration. Typology construction has been a favorite pastime of criminologists; during the 1940s, 1950s, and 1960s it was somewhat of a growth industry. During that time it became clear to criminologists that crime and criminals are heterogeneous phenomena. Embezzlement may have little in common with homicide, and upper-class white female criminals may have little in common with lower-class black criminals. Throughout the period, numerous typologies were formulated which organized the subject matter of criminology into types of crimes and criminals. In some cases, these types simply reflected commonly used categories (burglary, homicide) and served as a basis for organizing textbooks of deviance and crime. In other cases types were generated by sophisticated conceptual schemes, including a limited number of underlying dimensions that yielded clear and discrete types (for example Clinard and Quinney 1973 and Gibbons 1985).

The construction of typologies became embroiled more with technical considerations than with theory development. Typologies were judged by clarity, parsimony, mutual exclusivity, and inclusivity of the types. A model typology was thought to be one with clear rules for placing cases, with types that do not overlap, and with a limited number of types in which all cases can be placed. While important, emphasis on these concerns yielded theoretically sterile conceptual classifications and detracted attention from the main reason for typology construction: crime and criminals are so heterogeneous that the causes of one type may not be the causes of the other. That is, for typology construction and theory construction to go hand in hand, types must be theoretically relevant. If they are not, it is difficult to determine how the exercise constitutes a form of theoretical integration.

To theoretically partition the subject matter, the partitioning principle should be linked to the scope conditions of theories—that is, it must specify the conditions under which a theory applies. Consider deterrence and labeling theories. Deterrence theory argues that as punishment increases, deviance decreases; labeling theory argues that as labeling increases, deviance increases. The two terms, punishment and labeling, can easily be equated, because most forms of punishment also label and most forms of deviant labeling also punish. Can these two theories be integrated or are they inherently inconsistent? Tittle (1975) argues that there are scope conditions for both theories and these conditions do not necessarily overlap. Deterrence processes may operate where labeling
processes may not and vice versa. If the conditions that activate labeling processes outweigh those that activate deterrence processes, then societal reaction that both labels and punishes should increase deviance. Tittle specifies eight such conditions. For example, deterrence processes may operate more for some types of crime and labeling processes may operate more for others. Convicting a woman for prostitution would more likely produce a deviant career than convicting a woman for shoplifting. Being publicly labeled as a prostitute would open opportunities to continue the practice while closing opportunities for conventional relationships with men. To the contrary, being convicted for shoplifting would probably limit opportunities for continuing the practice while not necessarily closing opportunities for conventional employment.

In the above example, integration requires agreement on the criteria that partition the subject matter, thereby allowing the alternative theories to be used to explain different behaviors. A side-by-side approach may also link theories by recognizing that they partially overlap but diverge at some point to account for different behaviors or types of deviants. Hirschi (1979) identifies Elliott et al.'s (1979) integrated theory as a side-by-side approach where cases are initially distinguished on the strength of initial bonds. The process by which those with strong bonds become deviant initially is different than the process for those who never developed such bonds. This form of side-by-side integration has the potential of being transformed into an up-and-down approach, given that the theories share some common assumptions. For example, Hirschi's (1986) recent application of social control theory and rational choice theory are linked by the common assumption of both theories that human beings are self-seeking. Within that common structure, different explanatory variables are used to account for stable differences among the propensity to engage in criminal acts (criminality) and criminal events.

**End-to-End (Sequential) Integration**

To reiterate, end-to-end integration refers to conceptualizing a dependent variable in one theory as an independent variable in another, an independent variable in one theory as a dependent variable in another, or both. This type of integration would seem to be most applicable when causal conditions can be ordered on a continuum of immediate to remote causes (Jessar and Jessar 1973). By immediate we mean those causal conditions that act quickly, and more or less directly, on deviance and crime. The effects are not mediated by other specified conditions. At the individual level of analysis, we tend to think of perceptions and beliefs
as immediate causes of behavior. By remote we mean those causal conditions that act indirectly, or through other conditions, on deviance and crime. For example, at the individual level of analysis we tend to think of social status or religious affiliation as remote causes of behavior.

Some theories focus on immediate causes, generally psychological states or day-to-day social experiences. Differential association theory, for example, places its emphasis on cognitive states (definitions of right and wrong) and how these states are learned in day-to-day experiences with peers. The extent to which these experiences are embedded in patterns of cultural and social structure that characterize some but not other social units is of minimal concern. Other theories focus on remote causes. Some study complex patterns of social interaction which characterize small scale social units, such as family power structures, or those which characterize large scale social units, such as industrialization. Some study the demographic conditions that characterize small-scale units, such as household density, or those that characterize large-scale social units, such as population change. These conditions are frequently thought to affect deviance and crime, although it is quite unclear how these conditions alter the beliefs, perceptions, and day-to-day experiences that directly affect deviance and crime. Social disorganization theory, for example, purports that population heterogeneity and population change, as indicators or causes of social disorganization, affect deviance and crime, although it is not clear how population heterogeneity or social disorganization enter the day-to-day experiences, beliefs, and perceptions that cause acts of deviance and crime.

Hence, there is considerable opportunity and need to integrate in end-to-end sequences concepts that describe the psychological states and day-to-day experiences of people and those that describe the social and demographic structures of small and large scale social units. Such end-to-end sequences embed the psychological states and day-to-day experiences that directly lead to deviance within the patterns of cultural and social structure which characterize small and large scale social units; such end-to-end sequences also conceptualize these psychological states and day-to-day experiences as mediating the effects of patterns of culture and social structure on deviance.

A prominent form of end-to-end integration in the deviance literature is consideration of concepts from differential association theory as proximate causes and of constructs from social control theory as more remote causes. In a pure form of end-to-end integration, the variables from social control theory do not directly affect deviance but affect the variables from differential association theory, which in turn directly explain deviance. The empirical, if not theoretical, success of “pure” end-
to-end integration can be gauged by various path analytic techniques. Quite simply, if the effect of causal variables of one theory on crime (e.g., social control theory) and deviance pass through the causal variables of another theory (e.g., differential association theory), controlling for the latter should reduce the direct effects of the former to zero. However, such a "pure" form is uncommon. In practice, most efforts at end-to-end integration allow for both direct and indirect effects of the variables from both theories (e.g., Elliott et al. 1979; Johnson 1979; Massey and Krohn 1986). By so doing, these models have consistently been able to account for a greater proportion of the variance in deviant behavior than have the constituent theories by themselves.

One of the difficulties with such integrations is that they may not really integrate the constituent theories in any meaningful sense. Hirschi argues that such approaches fail to consider the assumptive differences in the constituent theories. For example, if differential association theory assumes that one must account for the motivation of deviant behavior whereas social control theory explicitly denies that motivational accounts are necessary, the theories can be reconciled only if these assumptions are reconciled. Hence, Hirschi's assertion that Elliott et al. "use the terms and ignore the claims of control theory" (1979, p. 34) is largely accurate.

Both forms of end-to-end integration (i.e., those that stipulate only "intervening" effects and those that also allow for direct effects) might better be labeled theoretical elaboration (Wagner and Berger 1985). While the theoretical product does incorporate empirical insights from research inspired by a second theory, it uses those insights to further specify the causal explanation contained in the first theory (differential association). Wagner and Berger suggest that theoretical elaboration is what most sociologists consider as growth and development.

Up-and-Down Integration

Up-and-down integration, or deductive integration, is the classic form of theoretical integration. It is accomplished by identifying a level of abstraction or generality that will incorporate some of the conceptualization of the constituent theories. This can be done by recognizing that theory A contains more abstract or general assumptions than theory B and, therefore, that key parts of theory B can be accommodated within the structure of theory A. Or it can be done by abstracting more general assumptions from theories A and B, allowing parts of both theories to be incorporated in a new theory C. We will call the former method theoretical reduction and the latter method theoretical synthesis.
Theoretical reduction is the typical form of integration employed in the natural sciences. This is sometimes easy to do, such as when the two theories use the same terms to describe and explain seemingly different phenomena ("homogeneous integration"). For example, the theory of mechanics was originally developed to explain the motion of point-masses—that is, bodies whose dimensions are small compared to the distances between them—and it was easily extended to similar motions of other bodies, such as rigid bodies which exhibit some forms of motion—rotation—that point-mass bodies do not (Nagel 1961).

Problems of reduction occur when the characteristics of one phenomenon are seemingly very different than the characteristics of another, when the terms of one theory are not among the terms of another, and especially when the terms of one theory appear to obscure the conceptual distinctions of another or to make conceptual distinctions obscured by another ("heterogeneous reduction"). This problem of reduction seems to be even further exacerbated when one theory deals with macro phenomena and another deals with micro phenomena. Such cases have generated the most attention and controversy, possibly because they bring into question the conceptual independence of a discipline of study. A classical case is the reduction of thermal dynamics, the study of thermal phenomena or the thermal behavior of bodies, to statistical mechanics and the kinetic theory of matter. Temperature, for example, a term in thermal dynamics, is used to describe macro phenomena. It has no equivalent in the kinetic theory of gases. Molecules have no temperature; they are neither hot nor cold. How, then, is temperature to be represented in terms of molecules?

Philosophers of science have discussed at some length this problem of heterogeneous reduction. In his classic monograph, Nagel (1961) argues that to reduce one theory to another, the terms of one theory must be embedded in the assumptions of another theory, because to deduce the propositions of one theory from the propositions of another, the terms of the former must be in the premises (assumptions) of the latter. Nagel specifies three general criteria for equating terms in two or more theories. One, the meaning of the terms of one theory are explicated or analyzed in terms of the meanings of another theory (meaning by analysis). Two, the meanings of the terms of one theory are assigned the meanings of the terms of another theory (meaning by convention or fiat). Three, the meanings of the different terms remain distinct and the terms are equated empirically; that is, the phenomena denoted by a term in one theory are assumed to bring about the phenomena denoted by a term in another theory. This assumption, of course, is subject to empirical tests.
Consider the temperature of gases. In the classical reduction it is equated with the mean kinetic energy of gases. Clearly, the meaning of temperature as used in classical mechanics cannot be derived from the meaning of "mean kinetic energy of molecules," as used in the kinetic theory of gases. On one hand, it has been argued that the two terms are equated by definitional fiat, because mean kinetic energy cannot be directly observed. On the other hand, it has been argued that mean kinetic energy can be indirectly observed in ways other than the observation of temperature, and that it can thus be empirically linked to temperature (Nagel 1961).

To summarize, in the natural sciences theoretical integration is frequently understood to mean theoretical reduction—that is, the deducing of the propositions of one theory from the premises of another. This requires that the terms in one theory be equated with the terms in another. In some cases this is quite simple and straightforward (homogeneous reduction) and in other cases it is highly problematic and controversial (heterogeneous reduction).

Figure 1

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<thead>
<tr>
<th>General Theory X</th>
<th>Specific Theory Y</th>
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<tr>
<td>A ⊆ C</td>
<td>B ⊆ F</td>
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<tr>
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<td>F ⊆ Deviance</td>
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<td>F ⊆ Deviance</td>
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Figure 1 illustrates how theoretical reduction might occur in the study of deviance. The proposition F implies deviance is part of both theories X and Y, but the proposition B implies deviance is only part of theory Y. To deduce the proposition B implies deviance from theory X, we must equate the concept B in theory Y with a term (for example, C) in the premises of theory X. For example, if B equals unemployment and C equals status change, we can argue that unemployment is a special case of status change and therefore that the proposition B implies deviance can also be deduced from theory X. Hence, since both propositions about deviance in theory Y are also part of theory X, we can argue that theory Y is reduced to theory X.

With the possible exception of economics, this type of integration is rarely attempted in the social sciences. (See Gibbs 1972 for an exception.) In one attempt at deductive integration, Burgess and Akers (1966)
try to subsume Sutherland’s differential association theory within social learning theory. Equating concepts contained in differential association theory with those contained in the premises of learning theory, they argue that the learning that takes place in interaction in primary groups is a special case of operant conditioning. Definitions favorable and unfavorable to the violation of the law are reconceptualized as a type of sub-verbal discriminative stimuli.

Many scholars in the social sciences view deduction as a form of theoretical imperialism because the theory being deduced loses its individual identity. The phrase “theoretical reduction” has a very negative connotation among many social scientists. For example, Burgess and Akers’ (1966) modification of Sutherland’s differential association theory by introducing (or subsuming it under) behaviorist principles has been characterized as a “revisionist takeover” that is a “travesty of Sutherland’s position” (Taylor et al. 1973, pp. 131–132).

Theoretical synthesis is even more difficult to find in the social sciences. It requires that abstract or general principles be postulated that will allow at least parts of both constituent theories to be subsumed and interrelated under them. Effective synthesis usually generates additional predictions not made by the constituent theories. Wagner and Berger (1985) suggest that if the constituent theories are competing theories, synthesis requires a new theoretical language. While this form of integration is difficult to achieve, it may have a dramatic impact on theoretical development.

**Cross-Level Integration**

Cross-level integration (integrating micro and macro theories) is sometimes thought to be both the most difficult and perhaps the most necessary type of theoretical integration. It is assumed to present unique problems. Some of these can be illustrated with reference to the three principles of integration. Consider side-by-side, micro/macro integration. Are there some types of deviants or deviance that are better suited to micro or macro explanations? Historically, numerous scholars have tried to show that some types of deviance are individual in nature and others are social in nature. Criminal behaviors that are rare and seemingly difficult to understand (for example, exhibitionism) have been thought to be best explained by psychological theories couched at the individual level of analysis. The experiences that lead to the immediate or causal psychological states are assumed to be the products of unique personal biographies not clearly tied to the patterns of culture and interaction which characterize large and small-scale social units. On the other hand,
criminal behaviors that are common and seemingly understandable (e.g., burglary), particularly when committed in groups and supported by a subculture, are thought to be best explained at the macro level. The experiences that lead to them are thought to be shared by many and to be tied to the culture and structural patterns of large scale social units.

The problems and simplicity of this historical micro-macro partition were made evident by Durkheim's analysis of suicide—a rare act of deviance seemingly difficult to understand. He showed that suicide variation among macro units is linked to the cultural and structural patterns of these units. Hence, what was thought to be a psychological phenomena turned out to be a social phenomena. Generally, we are not all sure that side-by-side integration of macro and micro level theories is possible or even desirable.

On the other hand, we feel that end-to-end integration of micro and macro-level theories is both possible and desirable. (We have already discussed this integration as that of remote and immediate variables.) A typical technique of such integration is contextual analysis, in which concepts used in macro level theory (for example, neighborhood disorganization, racial composition of a city, and income inequality) are included in micro theory. For example, people may be described by their own attitudes and race and by the mean attitude and racial composition of their social units such as their school, neighborhood, and city in a theory of crime or deviance. In many cases the contextual condition causes the individual condition, and thus may be thought of as a remote cause in an end-to-end integration. For example, neighborhood integration may affect psychological disorganization, leading to crime and deviance; thus, psychological disorganization may be conceptualized as mediating the effect of neighborhood disorganization on crime.

Contextual analysis, used extensively in many areas of research, has not been used much at all in the study of deviance and crime. Even fewer studies have examined the causal link between contextual and individual concepts in an end-to-end integration. Recently, however, a few studies have looked at the social class of both people and their neighborhood or city in theories of deviance and social control (Sampson 1986). (See also Myers and Talarico's [1987] analysis of the effects of community context on discrimination in sentencing).

To deduce either the propositions of a macro theory from the premises of a micro theory or the propositions of a micro theory from the premises of a macro theory is thought of as theoretical reductionism. As previously stated, such work has been strongly criticized by adherents of the theory whose propositions are being deduced as an infringement of their proper subject matter. Much of this debate—especially the question
of whether or not the macro propositions can be deduced from micro premises—has been quite academic and arcane. In the social sciences, particularly in the study of deviance and crime, there is so little deductive theory that even to talk of cross-level deductions seems like an academic exercise.

**Directions For Theoretical Integration**

**Conceptual Integration**

Some scholars have argued that if propositional integration is so difficult, one might start with conceptual integration. To conceptually integrate theories, the theorist equates concepts in different theories, arguing that while the words and terms are different, the theoretical meanings and operations of measurement are similar (see Pearson and Weiner 1985). Akers (chapter 1 of this volume), for example, argues that the concepts of many theories (social bonding, strain) can be equated with the concepts of social learning. The concept, “belief” in bonding theory is similar to the concept “definitions” in social learning, and the concept “blocked opportunities” in strain theory is similar to the concept “differential reinforcement” in social learning theory.

The purpose of conceptual integration is not always clear. Is it an end in itself or a means to some form of propositional integration? We feel that as an end in itself, its value is quite limited. It would seem to apply to those theories that use different concepts and measures to represent the same things and that make similar predictions. For example, if theory A states that X increases deviance and if theory B states that Y increases deviance, then conceptually integrating A and B yields conceptual parsimony. But if theory A states that Y increases deviance and theory B states that X decreases deviance, then conceptually integrating X and Y makes no sense and yields inconsistent predictions. However, in an area of study such as deviance and crime, where there are probably more terms, words, and concepts than meaningful distinctions, there is considerable opportunity for fruitful conceptual integration.

Most scholars, however, view conceptual integration as a means to propositional integration. Perhaps without explicitly saying so, they are thinking of deductive integration. But conceptual integration is neither a necessary condition nor a means to side-by-side and end-to-end integration. Both forms of propositional integration preserve the conceptual integrity of different theories. Integration is achieved by partitioning the subject matter of study or by conceptualizing the independent variables.
of one theory as the dependent variables of another. Only in deductive integration is conceptual integration a necessary condition and thus a means to propositional integration. As previously discussed, in deductive integration the concepts of the propositions to be deduced must be included in the premises of the other theory; hence, establishing some conceptual equivalence is necessary for deductive integration.

Theoretical Elaboration

Because of the problems in integrating theories with seemingly inconsistent assumptions, many scholars (Hirschi, Thornberry, and Meier, in chapters 2, 3, and 13 in this volume) argue for a strategy of theoretical elaboration; that is, a strategy of fully developing existing theories. They argue that extant theories of deviance and crime are so underdeveloped that we might better spend our time and energies on developing them rather than on integrating them.

Gibbs (chapter 12 in this volume) further argues that before we can even develop extant theories, three metatheoretical issues or questions must be answered: (1) What questions about deviance should be addressed? (2) How do we construct theories that address these questions? and (3) How do we test theories?

Swigert (chapter 9 in this volume), too, raises questions in this vein. She questions the appropriateness of the dependent variable or the subject matter in the study of crime. She argues that we should not allow lawyers, judges, and legislators to mandate our subject matter, changing it yearly if they so choose. While it is certainly legitimate to study the formulation and enforcement of the law as a social construction, is it useful to study those who violate the law as a distinct category of people? Among those who illegally appropriate others’ property, is it useful to distinguish between robbers, burglars, arsonists, and auto thieves as does the contemporary U.S. code? Is it even useful to distinguish between the legal and illegal appropriations of other’s property, given that the distinction is not always simple, changes over political units, and changes for the same unit over time?

In sum, these scholars are arguing that before we tackle the problems of theoretical integration, there are prior issues and questions that must be addressed. The search for integrated theory, according to this point of view, is decidedly premature.

"Small" or "Middle Range" Integration

Part of the problem of theoretical integration is that the extant theories are perceived as general theories rather than as parts of an emerg-
ing theory (Tittle, chapter 11 in this volume). Hence, scholars feel that complete theories must be integrated either propositionally or conceptually. This implicit or hidden assumption has made the task of integration seem monumental. Yet the concepts and propositions of most theories are only loosely linked. We can easily borrow ideas (concepts and propositions) from different theories and explore how they fit. Some propositions of different theories may be incompatible because they are tightly linked to incompatible assumptions. Other propositions, however, may not be so tightly linked to such assumptions, and some propositions of different theories may be deduced from a common set of assumptions, even if they were originally derived from incompatible assumptions.

One classic example of middle-range or small integration is Cloward and Ohlin’s (1964) revision of Merton’s anomie theory. They borrow from differential association theory the idea that knowledge of illegitimate means must be learned and that opportunities to learn them are differentially available. This idea, traditionally embedded in the general assumptions of Sutherland’s differential association theory, is not necessarily incompatible with assumptions of Merton’s anomie theory, although many of the assumptions of the general Chicago perspective, in which Sutherland’s theory was originally embedded, are incompatible with many of the assumptions of the structural functional perspective, in which Merton’s theory was originally embedded. Indeed, the ideas that legitimate and illegitimate opportunities are differentially available seem eminently compatible.

In this book, the papers by Bursik (chapter 7), Farrell (chapter 5), and Gove (chapter 4) illustrate the strategy of middle-range integration. Bursik, for example, includes a proposition on political decision making, originally embedded in the conflict perspective, in an ecological theory of crime, which is tied more to the general consensus than the conflict perspective. Following an ecological model, he argues that crime is caused by population instability, which is caused by political decisions on public housing as well as by processes of economic selection.

Summary and Conclusion

As stated at the outset of this essay, the scientific endeavor necessarily includes the goal of integrating or unifying empirical findings under a set of abstract constructs and relational principles. The most efficient means to that goal is clearly more ambiguous and controversial than the agreed-upon goal. We have briefly reviewed some of the requisites and problems inherent in alternative methods for integrating existing theo-
retical perspectives. We have also identified other strategies for theoretical development, including theory competition and theory elaboration. As our essay suggests and as evidenced by the variety of viewpoints in the essays to follow, it is difficult to determine the best strategy.

Whatever strategy is adopted, the end product must of course be assessed with reference to the general criteria of theory evaluation. As Wagner and Berger (1985, p. 703) note, theoretical growth has often been interpreted in terms of increasing empirical support. We wish to emphasize, however, two additional criteria that are particularly relevant in the assessment of integrated theories. Perhaps of greatest importance is the criterion of logical coherence, a criterion not often satisfied in the deviance literature. Many contemporary efforts that purport to pursue the goal of theoretical integration might be better described as attempts at prediction. Variables from two or more theories are included in the same prediction equation, but there is little concern with relating the various concepts to one another. Instead, attention focuses on the extent to which adding variables to the equation increases the multiple $R^2$. In this spirit, much contemporary research combines concepts from differential association theory, control theory, anomie theory, and deterrence theory into empirical models to predict all types of crime and deviance.

The problem with this strategy, as we have commented earlier, is that it does not deal with incompatibilities in basic assumptions or premises (cf. Hirschi 1979). It is our strong view that theoretical growth will occur only when theorists seriously attend to the logical structure of their arguments. More specifically, with respect to efforts at theoretical integration, theorists either must be able to show how seemingly contradictory premises can in fact be reconciled, or they must explicitly acknowledge their selection of certain premises in favor of others in those instances where genuine contradictions exist.

A second important criterion for assessing the success of theoretical efforts at integration entails a latent function of theory. As Stephen Cole (1975) has observed, theories serve not only to organize the accumulated body of knowledge and to allow for predictions about empirical phenomena. They also generate “intellectual puzzles” for scientists to work on. It is our suspicion that the growing interest in theoretical integration in the study of deviance and crime derives as much from a sense that the “puzzles” inspired by traditional theories have been exhausted as from dissatisfaction with the predictive power of available empirical models (cf. Cole 1975, pp. 210–214). Accordingly, a clear sign of successful theoretical integration will be the emergence of theoretical statements that will open up new research agendas. These statements should pro-
mote, in Merton's (1987, p. 7) apt phrase, new kinds of "specified ignorance"—i.e., novel realizations of the kinds of things that need to be known to foster the advancement of the discipline. Insofar as integrated theories further such developments, they will indeed have been well worth the effort.