

SOCIAL ORGANIZATION AND INSTRUMENTAL CRIME: ASSESSING THE EMPIRICAL VALIDITY OF CLASSIC AND CONTEMPORARY ANOMIE THEORIES*

ERIC P. BAUMER

REGAN GUSTAFSON

Department of Criminology and Criminal Justice
University of Missouri—St. Louis

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This research assesses the empirical validity of the classic anomie theory articulated by Robert Merton and the important contemporary extension of his work encompassed in Messner and Rosenfeld's institutional anomie theory. Using a unique aggregate-level data set, our empirical investigation reveals that, consistent with theoretical expectations, instrumental crime rates are significantly higher in areas where both a strong commitment to monetary success goals and a weak commitment to legitimate means exist. The tendency for this "goals/means" value complex to translate into higher rates of instrumental crime is reduced in the context of higher levels of welfare assistance and more frequent socializing among families. We also find that low levels of educational and economic attainment and high levels of inequality enhance the degree to which commitment to monetary success translates into instrumental crime. Overall, the findings are supportive of some claims by classic and contemporary anomie theories, but also they point to the need for further refinement of these perspectives and additional assessments of their empirical validity.

Do social collectivities in which there is an especially strong commitment to monetary success goals and a weak commitment to legitimate means for pursuing such goals exhibit the highest prevalence of money-generating crime? Is this particularly apt to be true in places where legitimate opportunities for pursuing monetary success goals are insufficient and

* We thank Richard Rosenfeld and Steven Messner for constructive comments on an earlier draft. Direct correspondence to Eric P. Baumer, University of Missouri—St. Louis, 8001 Natural Bridge Road, St. Louis, MO 63121 (e-mail: baumer@umsl.edu).

where levels of economic attainment are low and unequally distributed? These questions were at the heart of the puzzle that Robert Merton addressed in his seminal essay, "Social structure and anomie" (1938). Merton presented persuasive arguments in the affirmative to these questions in that essay and in subsequent contributions that expanded on and clarified his position (Merton, 1949, 1957, 1964, 1968).

The theory of deviance Merton articulated in this work has been highly influential in sociology and other disciplines (Cole, 1975; Garfield, 2006; Orru, 1987): It solidified anomie as a distinctly sociological concept relevant to explaining various forms of deviance, and it stimulated several theoretical elaborations and extensions of his arguments (e.g., Agnew, 1992; Cloward and Ohlin, 1960; Cohen, 1955; Messner and Rosenfeld, 1994). Yet, despite the importance of Merton's anomie theory in the social sciences, we still know very little about the empirical validity of its core claims. Scores of studies over the past several decades have evaluated the empirical connection between goal blockage and deviance among individuals (for reviews, see Agnew, Cullen, and Burton, 1996; Bernard, 1984; Burton and Cullen, 1992; Burton et al., 1994; Cole, 1975; Farnworth and Leiber, 1989; Kornhauser, 1978; Liska, 1971). These studies have produced valuable knowledge about propositions implied in Merton's anomie theory, but none directly addresses his arguments about the link between social organization and social deviance (see also Bernard, 1987; Messner, 1988; Messner and Rosenfeld, 2001). Nearly 70 years have passed since the publication of "Social structure and anomie" (Merton, 1938), and yet we still do not know whether places with a high level of commitment to monetary success goals and a low level of commitment to legitimate means for pursuing monetary success goals exhibit higher levels of crime and whether this is especially likely to be the case when legitimate opportunities for pursuing monetary success goals are insufficient.

During the past two decades, a significant revival of interest in and attention to Merton's work has occurred, mostly because of the important extension of his work by Messner and Rosenfeld (1994, 2007) in what has been labeled "institutional anomie theory" (IAT). Messner and Rosenfeld (2007) elaborate significantly on Merton's discussion of the sources of cultural disjuncture that are central to his explanation of deviance, and more importantly, they redirect his social structural focus on the stratification system to other key dimensions, namely noneconomic social institutions. Messner and Rosenfeld's IAT has reinvigorated the anomie perspective as a major sociological explanation of crime and deviance, and it has stimulated a flurry of macrolevel research during the past decade (Chamlin and Cochran, 1995; Maume and Lee, 2003; Messner and Rosenfeld, 1997; Piquero and Piquero, 1998; Pratt and Godsey, 2003; Savolainen, 2000;

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Stucky, 2003; for reviews, see Messner and Rosenfeld, 2006; Pratt and Cullen, 2005). Again, however, although these studies have generated important empirical insights about macrolevel variation in crime rates, they do not directly evaluate the most central propositions of IAT. In particular, it remains unknown whether the instrumental crime-generating tendencies of a high commitment to monetary success goals and a low commitment to legitimate means for pursuing such goals are lessened where a high commitment to and involvement in noneconomic social institutions exists.

The primary objective of the current study is to go beyond previous work in this area by evaluating the empirical validity of some core predictions contained in the anomie theories presented by Merton (1938, 1949, 1957, 1964, 1968) and Messner and Rosenfeld (1994, 2007) as they apply to cultural and social structural arrangements relevant to the pursuit of monetary success goals and variation in rates of instrumental crime across social collectivities. Our analysis is based on a macrolevel data set that combines survey data from the General Social Survey (GSS) on levels of commitment to monetary success goals and on levels of commitment to institutionalized means with data from a variety of sources regarding the availability of legitimate economic opportunities, levels of economic attainment and inequality, participation in and commitment to noneconomic social institutions, and levels of instrumental crime.

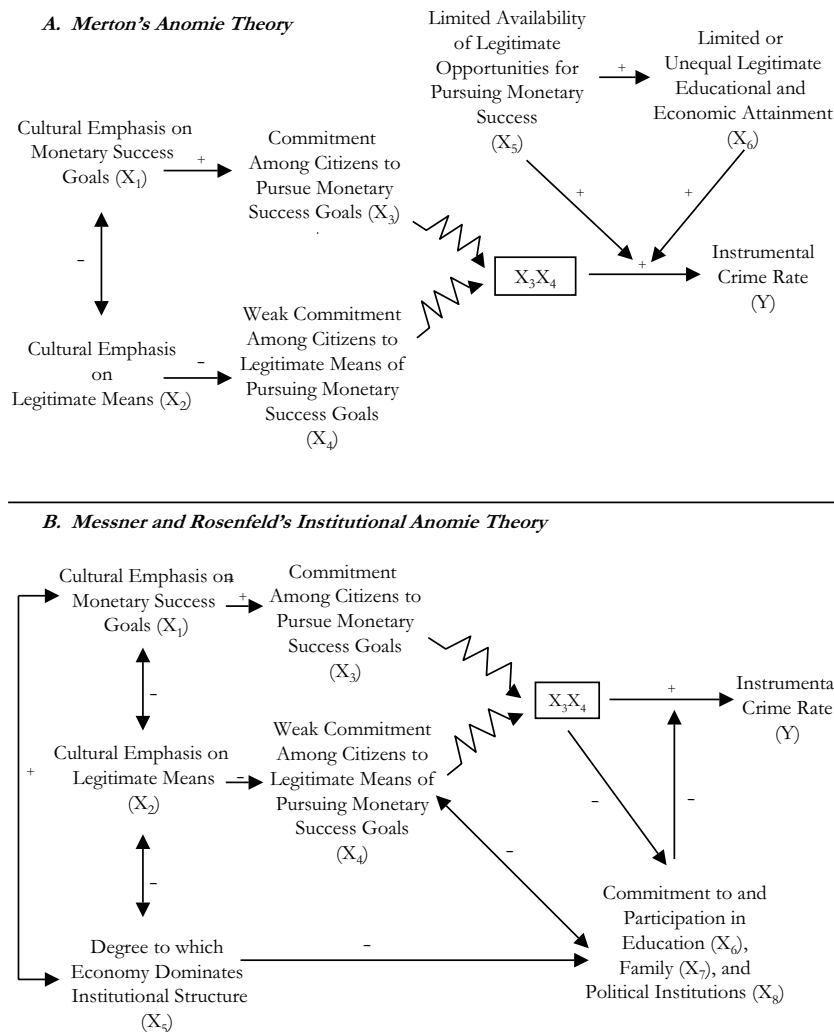
THEORETICAL BACKGROUND

Given the uncertainty that exists about the precise causal linkages implied in the classic and contemporary perspectives examined in the current study (Agnew, 1987; Bernard, 1987; Chamlin and Cochran, 1995; Maume and Lee, 2003), we begin by describing in some detail our interpretation of the types of concepts that should be measured and the relationships that should be evaluated in a comprehensive assessment of their empirical validity. To aid in this effort, we translate our interpretation of the two theories into causal models, which we display in figure 1. We first discuss Merton's anomie theory (displayed in panel A) and then explicate Messner and Rosenfeld's IAT (displayed in panel B).

MERTON'S ANOMIE THEORY

Disagreement on basic theoretical and methodological issues exists with respect to the theoretical model of deviance outlined by Merton, including the most relevant units of analysis; the distinct concepts that are represented; how those concepts are linked; and the types of measures and model specifications required to evaluate adequately the core predictions

Figure 1. Models of Instrumental Crime Implied in Classic and Contemporary Anomie Theories



(Messner, 1988). Pinning down Merton precisely on how or why the features of social organization upon which he focused translate into differences in rates of instrumental crime across social collectivities is a challenge, but such efforts are critical for specifying appropriate tests of the empirical validity of his theoretical account, for assessing the relevance

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of the extant empirical literature, and more generally for building a knowledge base on the perspective that is theoretically and empirically reflective. In that spirit, we present in panel A of figure 1 a causal model that conveys in precise terms our interpretation of the theoretical account by Merton of differences across social collectivities in levels of instrumental crime.¹

As others have noted, Merton's theory emphasizes the potential deviance-generating role of two dimensions of cultural structure and one dimension of social structure (Messner, 1988). With respect to cultural structure, Merton highlights as particularly important both the degree of emphasis placed on monetary success and the degree of emphasis placed on pursuing monetary success through *legitimate* means (X_1 and X_2 in figure 1, panel A). With regard to social structure, Merton emphasizes the potential importance of the degree to which available legitimate opportunities (or means) are insufficient to permit most members of the population to pursue monetary success goals (X_5). Merton's writings suggest that the primary role of the cultural structure is to shape the value commitments of the populations exposed to them, which are expressed as $X_1 \rightarrow X_3$ and $X_2 \rightarrow X_4$ in the figure; the corresponding estimates for the paths connecting these variables would reflect a socialization process, in particular the degree to which cultural values have been assimilated. Somewhat similarly, Merton's discussion of the opportunity structure suggests that it is integral mainly for shaping the degree to which all, or at least most, members of the population are able to employ legitimate means to pursue monetary success goals, or at least perceive that this is a viable option (i.e., $X_5 \rightarrow X_6$).

Given this interpretation, differences in instrumental crime across social collectivities in Merton's theoretical model are primarily a function of the degree to which populations across different areas are committed to pursuing monetary success goals (X_3), are weakly committed to doing so through legitimate means (X_4), and are confronted by limited access to, and low levels of, attainment in the legitimate opportunity structure (X_5 and X_6).² Importantly, Merton's argument suggests that higher values on

1. Here we focus on only the core elements of Merton's theoretical model for explaining variation in instrumental crime across social collectivities. See Baumer (2007) for a more detailed discussion of issues underlying the translation of Merton's discursive formulation into a formal causal model, including a description of several implied links excluded from figure 1 that are not central to the current investigation.
2. We use the terms "social collectivities," "societies," and "communities" interchangeably throughout this article. Although Merton and Messner and Rosenfeld highlight America as a good example of a social collectivity that scores at the extreme on the key cultural and social structural variables they emphasize, in our

any one of these key variables alone would not yield significantly higher levels of instrumental crime. This suggestion implies that none of these variables is expected to have a significant main effect on instrumental crime and that if they do, then such effects should be relatively weak. But, as several other scholars have noted (e.g., Bernard, 1987; Cullen, 1984; Messner, 1988), Merton suggested that these variables should exhibit relatively strong multiplicative effects. He emphasized two interaction effects, in particular.

First, as highlighted in Merton's discussion of the "modes of adaptation," the pressure toward innovative behaviors, such as instrumental crime, stems from a discrepancy between the degree to which community members are committed to pursuing monetary success goals and the degree to which they are committed to pursuing these goals through legitimate means, which is an imbalance that is indicative of high levels of anomie (e.g., Featherstone and Deflem, 2003; Messner and Rosenfeld, 2007; Orru, 1987). This component of Merton's argument is represented as a multiplicative effect in panel A of figure 1 by way of sawtoothed arrows emanating from the two indicators of value commitments in order to form the specified two-way interaction effect on instrumental crime ($X_3X_4 \rightarrow Y$).³ A literal reading of Merton's discussion of the possible modes of adaptation to the prevailing cultural structure reveals that this two-way interaction effect is necessary for explaining community differences in instrumental crime, but it may not be sufficient. Merton suggests the effects of the two-way interaction should be amplified when considered in the context of other relevant contingency or moderator variables.

Particularly important in this regard, and implicated in the second key multiplicative relationship developed in Merton's theoretical model, is the distribution of legitimate means that can facilitate the pursuit of monetary success goals. Merton's (1938: 678–81) conceptualization of "legitimate opportunities" in this regard is open to multiple interpretations, but his elaborated discussions of insufficient and unequal "access" to legitimate means/opportunities seem to emphasize not only the degree to which the

view their theoretical arguments are not limited to explaining "American exceptionalism" in crime and deviance or variation in deviance across a particular type of social collectivity.

3. Given the centrality of higher order interactions in the theoretical models outlined by Merton (1938) and by Messner and Rosenfeld (2001), we adopt the method of using sawtoothed arrows to represent key two-way interactions as distinct variables, such as X_3X_4 in figure 1 (see Bollen, 1998; Bollen and Paxton, 1998). To convey how other factors moderate this two-way interaction effect, as implied in the two theoretical models (i.e., to form the implied three-way interactions), we then use the more common approach of drawing an arrow from the specified moderator to the causal path that represents the two-way interaction effect.

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social structure provides a sufficient stock of opportunities suitable for members of the population to pursue monetary success goals (e.g., the sheer number of jobs available) but also the degree to which available opportunities actually yield, or are at least perceived to provide the possibility of yielding, the achievement of monetary success (e.g., the level and equality of educational and economic attainment) for all or most members of a given social collectivity (Rosenfeld, 1989). These two dimensions of the social structure parallel at the macrolevel what some social scientists refer to as equality of opportunities and equality of outcomes, respectively (see, e.g., Breen and Jonsson, 2005).

In essence, Merton suggests that an insufficient supply of legitimate opportunities constrains the range of options people have, in theory, for pursuing valued monetary success goals and also reduces the likelihood that using legitimate opportunities, in practice, will enable them to satisfy culturally valued goals. All else equal, this insufficiency increases the possibility that people will turn to illegitimate means to attempt to achieve the culturally extolled goal of accumulating money and monetary success (see also Bernburg, 2002; Maume and Lee, 2003). The logic of Merton's theory is that when people are strongly encouraged and committed to pursue monetary success goals but weakly encouraged and committed to pursue them via institutionalized norms, the tendency to use illegitimate means (e.g., instrumental crime) to attempt to satisfy monetary goals, will be greater in the context of particular structural realities. Specifically, this tendency will be heightened where fewer legitimate opportunities exist that can facilitate the accumulation of money and wealth (e.g., places where jobs are relatively scarce and access to higher education is relatively limited), where the social structure does not yield a high level of economic attainment for most people (e.g., places with high levels of poverty and unemployment, low levels of educational attainment, and relatively few people in high earning jobs), and where high levels of economic and educational inequality ensue. According to Merton, this is likely to be the case because illegitimate means are perceived as more expedient under such circumstances or because people in such situations experience stress or become frustrated (e.g., Agnew, 1987; Bernard, 1987; Messner, 1988).⁴ In

4. The validity of the proposed moderating role of "legitimate opportunities" may depend on the reasons behind the evident failings of the social structure, something Merton does not appear to address systematically. Although Merton referred in his writings to the potential downside of relatively large segments of a population being "denied effective opportunities" or experiencing "blocked opportunities" or "differential access to the approved opportunities," he did not discuss at length the various and complex ways in which these conditions can arise (see Rosenfeld, 1989). For instance, variation across places in the degree to which people are able to pursue monetary success goals through legitimate means could arise because of variation across places in the number of legitimate

either case, our view of Merton's discussion of the role of opportunity structure in constraining the ways in which individuals can legitimately satisfy monetary success goals translates into three-way statistical interactions involving, on the one hand, variables that reflect differences across social collectivities in value commitments (i.e., a relatively high level of commitment to pursuing monetary success goals and a relatively weak commitment to legitimate means of pursuing monetary success) and, on the other hand, variables that capture differences in access to and success in pursuing legitimate opportunities. We express this in figure 1 with moderating effects of the degree to which an insufficient stock of legitimate opportunities (X_5) exists and the degree to which levels of attainment are relatively low and unequally distributed (X_6) on the causal path that represents the multiplicative effect on instrumental crime of a strong commitment to monetary success goals and a weak commitment to institutionalized means (X_3X_4). Statistically, this amounts to the following three-way interaction effects on instrumental crime ($X_3X_4X_5 \rightarrow Y$ and $X_3X_4X_6 \rightarrow Y$).

MESSNER AND ROSENFELD'S INSTITUTIONAL ANOMIE THEORY

In *Crime and the American Dream*, Messner and Rosenfeld (1994, 2007) provide an account of American exceptionalism in levels of criminal violence, especially instrumental violence, that draws heavily from Merton's anomie theory. Although Messner and Rosenfeld did not set out to propose a formal theory or to critique Merton's theory causal-path by causal-path, the model that we extract from their work is compatible in many ways with the central focus of Merton's theory. Messner and Rosenfeld (2007) also incorporate into their theoretical model, however, insights from the sociological literature on social control and on the nature and functioning of noneconomic social institutions, which are issues that Merton alludes to in his writings but does not fully develop in his theoretical explanation. In panel B of figure 1, we illustrate our interpretation of the causal model implicit in Messner and Rosenfeld's explanation of differences in instrumental crime across social collectivities, which is now widely referred to in the literature as IAT.⁵

As the figure shows, the anomic cultural arrangement that is central to

opportunities available; the suitability of available opportunities; the motivation, skills, and ability of persons eligible to consider available opportunities; the ways in which opportunities are allocated; or some combination of these elements. Presumably, some of these contributing factors to insufficient opportunities, low attainment, and/or high inequality might be more "frustrating" than others or be more apt to make illegitimate opportunities look particularly expedient.

5. As in our description of Merton's theoretical model, here we focus on only the elements of IAT that are central to the issues investigated in the current study.

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Merton's anomie theory—a strong cultural emphasis on monetary success goals and a weak cultural emphasis on pursuing monetary success goals through institutionalized or legitimate means—also is prominent in Messner and Rosenfeld's explanation. Although not shown in the figure, Messner and Rosenfeld go much further than Merton by specifying the distinctive value complex upon which this cultural imbalance rests and by offering a vivid description of the historical and contemporary forces that gave rise to and continue to sustain it (see also Bernburg, 2002). More central to the issues addressed in our research, however, the underlying logic of their description of how this cultural imbalance translates into relatively high levels of instrumental violence seems identical to the logic in Merton's description. That is, Messner and Rosenfeld imply a process wherein the cultural values of a society are transmitted to individuals who then pursue actions that make sense given the value commitments they have internalized, conditional on other factors that moderate this process. As noted, the implication of this argument is that the key proximate predictor of spatial variation in instrumental crime rates is the interaction between the extent to which populations across different areas are committed to pursuing monetary success goals and the extent to which they are weakly committed to doing so through legitimate means, as displayed in panel B of figure 1 (i.e., $X_3X_4 \rightarrow Y$). Like Merton, Messner and Rosenfeld (1994, 2007) argue that this association is likely to be a highly conditional one, moderated by several elements of the social structure.

Significant overlap exists between Messner and Rosenfeld's IAT and Merton's theoretical model, but these perspectives differ in the way that they conceptualize social structure. In many ways, Messner and Rosenfeld provide a much more detailed explication of the social structure than Merton, but they also largely omit from early articulations of their arguments a discussion of the dimension of social structure that is central to Merton's thesis: the stratification system. As Bernburg (2002: 738) aptly points out, "Messner and Rosenfeld ignore Merton's insight on the role of the unequal distribution of people's objective conditions in translating the anomic ethic into crime and deviant behavior." Messner and Rosenfeld (2006, 2007) have recently acknowledged this omission, and they suggest that integrating it into their model would provide a more complete explanation of geographic differences in levels of instrumental crime.

Despite the limited attention they give to the legitimate opportunity

See Messner and Rosenfeld (2007) for a more detailed treatment of other pertinent causal links, including those that reference the sources of variation in cultural arrangements, the degree to which the economy dominates institutional structures, and the factors associated with levels of participation and investment in noneconomic institutions.

structure, Messner and Rosenfeld (1994, 2007) greatly expand the conceptualization of social structure found in Merton's work by highlighting the potential importance of several key social institutions. Specifically, they emphasize the relative strength of economic, political, educational, and familial institutions in the United States and suggest that the balance of power between these institutions is both a consequence of and a contributor to the prevailing cultural structure. Messner and Rosenfeld's explanation for the exceptional levels of instrumental violence in the United States highlights the dominance of the economy and an associated weakness of familial, educational, and political institutions. According to their argument, this is an institutional imbalance that, coupled with existing cultural arrangements, has produced a population that is more likely than other populations to pursue monetary success goals "by any means necessary."

Messner and Rosenfeld (1994, 2007) do not provide explicit guidance about the causal mechanisms that link the institutional balance of power to variation in instrumental crime, but as we show in the bottom half of figure 1, they seem to suggest a process whereby the dominance of the economy in the institutional structure (X_5) reinforces the cultural emphasis on monetarily defined success (i.e., X_1) and dampens the cultural emphasis on using only legitimate means to pursue monetary success goals (i.e., X_2), which in turn increases the degree to which people are highly committed to pursuing monetary success goals and weakly committed to pursuing such goals through legitimate means (i.e., X_3X_4). Furthermore, the dominance of the economy in the institutional structure and the joint occurrence of a high degree of commitment to monetary success goals and a high degree of weak commitment to legitimate means (i.e., X_5 and X_3X_4) diminish participation and investment in key noneconomic social institutions, namely familial, educational, and political institutions, which are designated as X_6 , X_7 , and X_8 , respectively, in panel B of figure 1.⁶

Messner and Rosenfeld suggest that the devaluation of noneconomic social institutions enhances the likelihood that members of the population will prioritize the pursuit of monetary success goals at the expense of other goals. More central to the current research, they argue that weakened

6. It is unclear whether Messner and Rosenfeld meant for the concepts we label as "degree to which economy dominates institutional structure" and the "degree of commitment to and participation in education, family, and political institutions" to be distinct. We treat them as such in our presentation given that the former might refer to the public's perceived value of different institutional roles and various government policies and programs that advantage particular institutions in broad terms (e.g., deregulation of the economy or limits on family leave), whereas the latter might capture potential outcomes of such valuations and policies (e.g., time spent with family or various profamily employment benefits).

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commitment to and investment in noneconomic social institutions also increase the likelihood of illegitimate responses to culturally induced pressures for achieving monetary success (e.g., instrumental crime) indirectly by disrupting the transmission of prosocial norms about the virtues of pursuing monetary success goals only through legitimate means and more directly by reducing exposure to external social controls and social support (Messner and Rosenfeld, 2007). Although the precise meaning of these links is open to debate (Maume and Lee, 2003), based on our reading, the primary causal role of noneconomic social institutions in IAT is a moderating one. Specifically, the capacity of noneconomic social institutions to temper the ways in which people pursue monetary success goals in the context of weakened commitment to legitimate means is compromised when participation in and commitment to such institutional arrangements is low (for a similar interpretation, see Chamlin and Cochran, 1995; Piquero and Piquero, 1998; Savolainen, 2000).⁷ We capture this process in figure 1 with an arrow drawn from commitment to and participation in educational, familial, and political institutions (i.e., X_6 , X_7 , and X_8) to the causal path that reflects the interactive effect on instrumental crime of strong commitments to culturally valued monetary success goals and weak commitments to legitimate means of pursuing those goals (i.e., $X_3X_4 \rightarrow Y$). Thus, our interpretation is that the key arguments contained in Messner and Rosenfeld's theory are captured by a series of three-way interaction effects (e.g., $X_3X_4X_6 \rightarrow Y$, $X_3X_4X_7 \rightarrow Y$, and $X_3X_4X_8 \rightarrow Y$).

THE CURRENT STUDY

A complete evaluation of the numerous research puzzles displayed in the two panels of figure 1 would require multiple waves of data on social collectivities (potentially defined in various ways, ranging from neighborhoods to nation-states) that exhibit variation in levels of instrumental crime and in the explanatory variables emphasized in the two perspectives. A full test also would require direct indicators of global cultural features

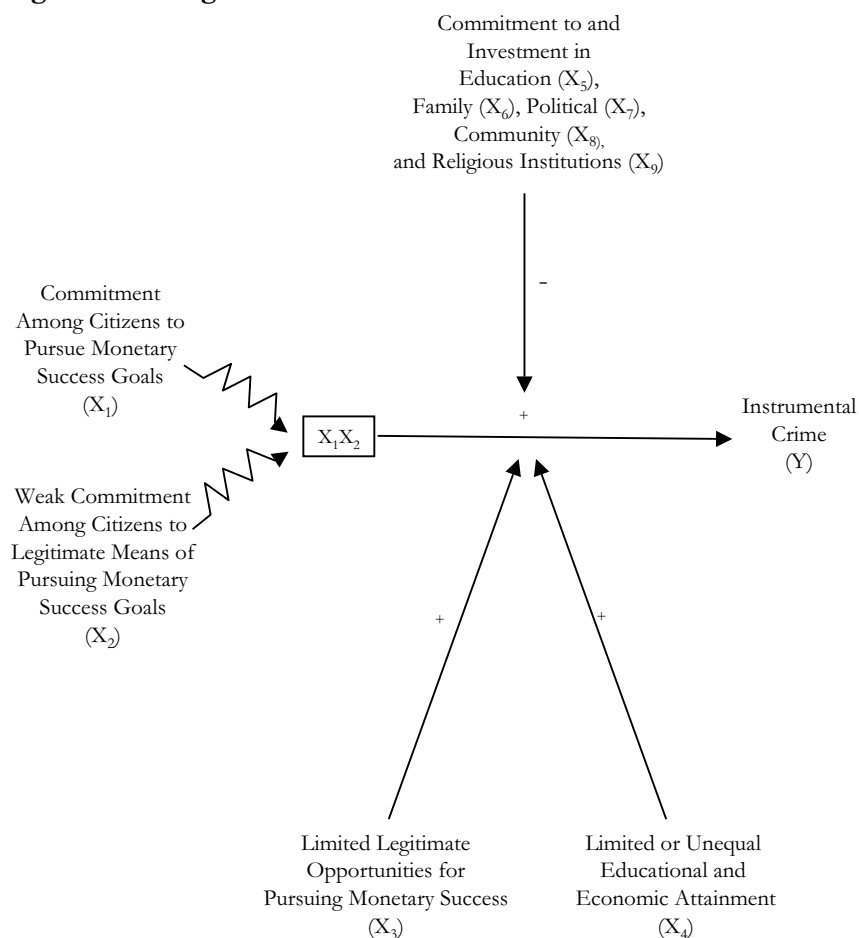
7. Maume and Lee (2003) interpret Messner and Rosenfeld's (1994, 2007) theoretical discussion as also implying that noneconomic social institutions also mediate the effects of anomic conditions on levels of instrumental crime. In our view this specification is inconsistent with the underlying logic of IAT, which implies that the social control and social support functions of noneconomic social institutions would not be necessary for regulating levels of instrumental crime *unless* a strong commitment to monetary success goals and a weakened commitment to legitimate means existed. This logic implies moderation rather than mediation. Nevertheless, Maume and Lee's interpretation yields an interesting empirical prediction to which our data can partially speak, so we return to this issue in the results section.

(i.e., the degree of cultural emphasis on monetary success goals and legitimate means of pursuing such goals) and of structural arrangements (e.g., the structure of the economic system and indicators of institutional functioning) reflected across a reasonably large sample of places. Because these societal features are emergent properties of social systems (see Lazarsfeld and Menzel, 1965; Liska, 1990)—not merely aggregations of individual relationships, attitudes, and behaviors—they would need to be measured through an assessment of government policies and the customs, rituals, manners, and practices in specified communities, as reflected in “cultural artifacts” such as books, newspapers, magazines, film, speeches, and other such sources (Messner and Rosenfeld, 2006). Finally, a complete test would require data on the extent to which the populations of the social collectivities under study have assimilated cultural values, have access (or perceive that they have access) to opportunities to pursue monetary success goals through legitimate means, are committed to or value noneconomic social institutions, and are involved in instrumental criminal activities.

A comprehensive empirical test of the anomie theories under review is well beyond the reach of existing sources. However, the data used for our study allow us to assess some relationships that are central to these theoretical arguments and that have not received a great deal of previous empirical scrutiny. The empirical predictions we evaluate are summarized in figure 2, which integrates insights from Merton’s anomie theory and Messner and Rosenfeld’s IAT on the proximate predictors of instrumental crime.

As illustrated, we examine whether geographic differences in levels of instrumental crime are a function of the interaction between the degree of commitment among citizens to pursue monetary success goals and the degree of weak commitment among citizens to pursue monetary success goals via legitimate means ($X_1X_2 \rightarrow Y$). Furthermore, we examine whether any observed multiplicative effect of these conditions is moderated by differences across places in 1) the degree to which legitimate opportunities for pursuing monetary goals are limited (X_3) and the degree to which educational and economic attainment is limited or unequally distributed (X_4), as emphasized by Merton (i.e., $X_1X_2X_3 \rightarrow Y$ and $X_1X_2X_4 \rightarrow Y$); and 2) the degree of commitment to and participation in noneconomic social institutions ($X_5 \dots X_9$), as emphasized by Messner and Rosenfeld (i.e., $X_1X_2X_5 \rightarrow Y$, $X_1X_2X_6 \rightarrow Y$, $X_1X_2X_7 \rightarrow Y$, $X_1X_2X_8 \rightarrow Y$, and $X_1X_2X_9 \rightarrow Y$). With respect to the latter, we consider the potential moderating role of indicators of commitment to and investment in each of the institutions highlighted by Messner and Rosenfeld (familial, educational, and political

Figure 2. Integrated Anomie Causal Model



institutions) along with indicators of community social capital and religious institutional strength, both of which have been featured in recent theoretical discussions and empirical research on aggregate crime rates (e.g., Messner, Baumer, and Rosenfeld, 2004; Putnam, 2000).

Although well short of a full test of IAT or Merton's anomie theory, our study goes significantly beyond previous efforts to assess the empirical validity of these perspectives. Most studies examine important implications of these theories rather than directly assess the implied causal links (Chamlin and Cochran, 1995; Hannon and DeFronzo, 1998; Krahn, Hartnagel, and Gartrell, 1986; Maume and Lee, 2003; Messner, 1983;

Messner and Rosenfeld, 1997; Piquero and Piquero, 1998; Pratt and Godsey, 2003; Savolainen, 2000). These studies contribute much to our understanding of spatial variation in crime and deviance, but they do not speak directly to the core questions of whether instrumental crime rates are higher in places where a stronger commitment to monetary success goals and a weaker commitment to legitimate means exist and of whether any observed effect of this goals/means imbalance is moderated by adverse economic conditions or levels of participation in and commitment to noneconomic social institutions.

Three recent studies have examined more directly some cultural arguments contained in classic and contemporary anomie theories (Cao, 2004; Cullen, Parboteeah, and Hoegl, 2004; Jensen, 2002). Cao (2004) and Jensen (2002) evaluate whether America exhibits the type of exceptional cultural features emphasized by Merton and by Messner and Rosenfeld. Using the World Values Survey (WVS), the results of these studies challenge claims that Americans are exceptional in their commitment to monetary success or in their willingness to justify deviant means of pursuing such success. However, these studies do not fully consider the main causal processes implied by Merton or by Messner and Rosenfeld, and a recent critique of their findings reveals that conclusions drawn from the WVS on these issues are highly sensitive to the specific items used to measure the core concepts (Messner and Rosenfeld, 2006).

Cullen, Parboteeah, and Hoegl (2004) use individual- and aggregate-level data from the WVS for 3,450 managers from 28 nations to assess the main effects of several dimensions of national culture that Messner and Rosenfeld (2007) identify as foundations of the American dream (e.g., achievement, individualism, universalism, and pecuniary materialism) and of several indicators of the strength of social institutions on the degree to which managers report that it is justifiable to engage in various deviant business practices. Although they do not examine the interactive effects that are central to Messner and Rosenfeld's theory (i.e., interactions between the indicators of culture and the indicators of institutional strength) nor do they consider actual involvement in instrumental crime, their analysis reveals evidence consistent with some basic tenets of Merton's theory and IAT. In particular, Cullen, Parboteeah, and Hoegl (2004) find that exposure to the cultural values of universalism and pecuniary materialism increases the degree to which managers are willing to justify deviant business practices. Overall, however, their results provide mixed support for predictions derived from IAT.

In sum, previous research rarely has considered key variables in classic and contemporary anomie theoretical models, such as the extent to which members of different populations are strongly committed to monetary success goals and weakly committed to legitimate means. Thus, past research

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has not addressed whether these variables exert main effects on crime rates, interact with one another, or interact with other variables, including the distribution of educational and economic opportunities and attainments as well as the strength of noneconomic institutions, in such a way as to affect crime rates as specified theoretically. Our analyses are directed at answering these key theoretical questions.

DATA AND METHODS

DATA

We evaluate the links shown in figure 2 with data on instrumental crime rates from the Uniform Crime Reports (UCR); indicators of the level of commitment to pursuing monetary success goals, the level of commitment to using legitimate means to pursue monetary success goals, and other conditions from an aggregate-level version of the GSS; measures of socioeconomic and demographic conditions from the U.S. Census Bureau; and other relevant variables drawn from a variety of additional sources for 77 geographic areas in the United States for the mid-to-late 1970s. The crime and census data used in the analysis are standard for most aggregate-level crime studies (see, e.g., Kposowa, Breault, and Harrison, 1995; Land, McCall, and Cohen, 1990), but the aggregated GSS data and the units of analysis employed are less common and therefore warrant some elaboration.

Although the GSS has been used extensively for individual-level analyses of various topics, a distinctive feature of the GSS data used for our research is that they contain geographic codes that identify the primary sampling units (PSUs)—metropolitan areas and non-metropolitan counties—from which respondents were selected. The GSS sampling units are chosen with the purpose of generating a nationally representative sample of households in the continental United States. They therefore reflect a broad selection of geographic areas across the nation, and samples drawn within these units are “self-representing” so that aggregated individual responses are representative of the area from which they are drawn (for a more detailed discussion of GSS sampling methods, see Davis and Smith, 1998: Appendix A). Previous studies have used the geocoded GSS to link aggregate-level data from external sources to the household respondents (e.g., Baumer, Messner, and Rosenfeld, 2003; Taylor, 1998) and to aggregate survey household-level data from the GSS to describe levels of social capital, gun prevalence, and other attributes of the geographic areas sampled in the survey (e.g., Kleck, 2004; Moody and Marvell, 2005; Rosenfeld, Messner, and Baumer, 2001). We use the procedure applied in the latter studies for the purposes of our research and aggregate GSS individual responses within sample units to construct aggregate-level measures of

concepts that are central to evaluating the empirical validity of the predictions derived above from Merton's theory and IAT.

Relying on the GSS for key measures means that our analysis is based on a somewhat novel sample, at least compared with most conventional aggregate-level samples, and that we must employ data from the 1970s, the only period for which the relevant GSS measures are available. The units of analysis for our study represent 77 of the 87 geographic units that composed the sampling frame for the GSS during the 1970s; 52 of the units included represent metropolitan areas, and the other 25 represent individual non-metropolitan counties.⁸ Past research on crime and social control has shown that the GSS sample of counties and metro areas generates findings that are very similar to analyses based on more conventional samples of cities, counties, and metropolitan areas (e.g., Rosenfeld, Messner, and Baumer, 2001; Stults and Baumer, 2007). With respect to the time frame covered in our study, to preserve the implied temporal order as best we can, we assess the effects of measures from the GSS and other sources estimated approximately for 1975–1976 on levels of instrumental crime rates estimated for 1977. Although it is usually preferable to evaluate research issues with more recent, and ideally the most recent data available, a strong theoretical rationale does not seem to exist against using data from the 1970s to evaluate the predictions outlined in the theories developed by Merton and by Messner and Rosenfeld, nor have we found arguments suggesting that the predictions found in these theories have changed over time so that they would be more or less relevant within a given historical era. Furthermore, using data from the 1970s allows us to go beyond most previous studies, which have been restricted to standard census-derived explanatory variables that may have limited relevance for the theoretical frameworks under review.

MEASURES

DEPENDENT VARIABLE

As noted, we limit our attention to the implications of Merton's and Messner and Rosenfeld's arguments for explaining community differences in *instrumental crime rates*. Accordingly, we focus our empirical analysis on a composite dependent variable that captures differences across places in the relative frequency of crime geared primarily toward the acquisition of money or goods that could be converted to cash. Specifically, using county-level data from the UCR program (U.S. Department of Justice,

8. We exclude 10 of the original 87 GSS sample units (5 metropolitan areas and 5 non-metropolitan counties) because of insufficient data for several key variables included in the analysis. The biggest source of missing data that led to exclusion was incomplete or nonexistent data on levels of instrumental crime.

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1998), we construct a measure of instrumental crime that reflects the number of robberies, burglaries, larcenies, and auto thefts per 100,000 residents in our sample units for 1977.⁹

KEY EXPLANATORY VARIABLES

Two of our key explanatory variables are 1) the degree of commitment to pursuing monetary success and 2) the degree of commitment to legitimate means of pursuing monetary success goals among members of the communities in our study. We combined GSS data from 1973 to 1976 and aggregated survey responses within our sample units to construct estimates of the prevalence of these value commitments.¹⁰ The degree of *commitment to monetary success goals* is measured with an item from the GSS that taps whether residents of the sample communities agreed with the statement that “next to health, money is the most important thing.” The measure used in our study represents the percentage of community respondents who indicated that they agree with that statement. We interpret higher values on this variable to reflect a stronger commitment by community members to pursue activities directed at maximizing monetary success.

The degree of *weak commitment to legitimate means* for pursuing monetary success goals is measured by aggregating, within sample units, responses to a GSS item that assesses whether respondents agree with the statement that “there are no right or wrong ways to make money, only hard and easy ways.” The measure used in our analysis reflects the percentage of persons who agree with this statement, and we interpret higher scores on this measure as being reflective of a weaker commitment by community members to pursue monetary success through legitimate means.

As noted, Merton emphasizes as potential moderator variables not only the degree to which the social structure provides a sufficient stock of opportunities suitable for members of the population to pursue monetary success goals but also the degree to which available opportunities actually yield or are at least perceived to yield the achievement of monetary success for all. This broad conceptualization of “limited legitimate opportunities” calls for analyzing indicators of the relative number of economic opportunities available in a given area, along with indicators of the level of

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9. For this measure and several others used in our study, to obtain estimates for the metropolitan areas represented in our study, we then aggregated the county-level data.
 10. We pool data across multiple years of GSS data to maximize sample sizes within sample units. Sample sizes range from 75 to 350 across the 77 units included in the study.

economic attainment and inequality (see also Rosenfeld, 1989). We include measures of each in our analysis.

We gauge the extent of legitimate employment opportunities in 1976 with a ratio of the total number of persons aged 16 years and older in our sample units who were employed or who were seeking employment (i.e., the labor or work force) to the number of jobs available within the labor market areas that encompass our sample units, a ratio we label as *limited job availability*. The size of the labor force in 1976 was estimated by interpolating from 1970 and 1980 county census estimates. Estimates of the number of existing jobs in 1976 in the labor market areas that cover our sample units are based on annual county-level information obtained from the Regional Economic Information System (REIS) maintained by the Bureau of Economic Analysis (BEA), which we aggregated to characterize labor market areas. This source provides the most reliable estimates of the number of jobs in a given area and is preferred over other sources such as the decennial census, which counts people (employed and unemployed) rather than the number of jobs (see Bureau of Economic Analysis, 2007; Scorsone and Zimmerman, 2003). As constructed, higher scores on the ratio used in our study indicate a surplus of current and would-be workers relative to the number of jobs for our sample units or, alternatively, a scarcity of job opportunities available relative to the number of persons who are working or looking for such opportunities.¹¹

We use two measures to capture variation across places in the degree to which available opportunities yield outcomes that are indicative of a social structure that yields insufficient and unequal chances of achieving monetary success and accumulating wealth. On their face, these measures are conceptually distinct from the measure of legitimate opportunities just described and may be particularly germane to shaping perceptions about whether achieving monetary success goals through legitimate means is realistic for all individuals, independent of the available stock of legitimate opportunities.

The first measure, which we label as *low educational and economic attainment*, combines six items that indicate differences across our sample

11. For the metropolitan areas in our sample we simply used the sum of jobs within the geographic boundaries covered by these areas as the equivalent labor market area. For single county units in our sample, the labor market areas reflect economically defined commuting zones (using 1980 definitions), which are designed to reflect the full geographic area in which county residents might work or seek jobs, irrespective of county population size (Tolbert and Sizer, 1996). In supplementary analyses, we experimented with an alternatively defined measure that captures people not currently in the labor market, the ratio of all persons aged 16–64 years to the number of jobs. The findings for this measure were very similar to those reported below.

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units in absolute attainment levels ($\alpha = .86$). Specifically, we standardized and summed the following six items to construct a scale capturing differences across areas in low levels of attainment: 1) the percentage of persons aged 16 to 19 years who are not high-school graduates or currently in school (i.e., school dropouts), 2) the percentage of persons aged 25 years and older who did not finish high school, 3) the percentage of persons in the civilian labor force who are unemployed, 4) the percentage of persons in the labor force who are employed in nonmanagement and nonprofessional jobs, 5) the percentage of families with incomes below the poverty line, and 6) the community average self-reported social class standing. The first five items were estimated for 1976 by interpolating from 1970 and 1980 county census data and aggregating to the GSS PSUs, and the last item was created from the GSS by aggregating within PSUs data from 1973 to 1976 on a question that asks respondents to self-report their social class (i.e., 4 = lower class. . . 1 = upper class).

Our second measure of economic attainment captures variation across places in the distributional equality of outcomes for legitimate economic and educational pursuits. Specifically, we constructed a multi-item scale that combines the Gini index of income inequality and the Gini index of educational inequality, both of which have been linked to crime in previous macrolevel studies (e.g., Galea and Ahern, 2005; Maume and Lee, 2003). We first estimated the two indices of inequality for 1976 by interpolating from decennial census data for 1970 and 1980, and then we standardized the measures and summed them to create a scale that we label *educational and income inequality* ($\alpha = .92$).

To assess claims relevant to Messner and Rosenfeld's IAT, we include several indicators of the degree of commitment to or value placed on noneconomic social institutions. The measures developed are constrained somewhat by the available data and the time period under review, but each seems to have sufficient face validity to assess in a preliminary way the mechanisms emphasized by Messner and Rosenfeld (2007). The *percentage of government expenditures on education* in 1976 and the number of *pupils per teacher* in the schools in our sample communities during the 1975/1976 academic year serve as indicators of the commitment to educational institutions. The former was created by interpolating from estimates of government spending on education and other functions in 1972 and 1977 taken from County and City Data Books (U.S. Department of Commerce, 1999, 2000). The latter was obtained from the Elementary and Secondary General Information System (ELSEGIS) data (U.S. Department of Education, 2001). We also use two measures to gauge levels of commitment to family. The first measure reflects differences across places in the amount of time people spend socializing with family members (*time spent with family*). This variable was constructed by aggregating responses to

three items from the 1974–1977 GSS to measure the percentage of persons who socialized several times a month with siblings, parents, and other relatives, respectively, and summing standardized values for these items ($\alpha = .79$). The second indicator of family institutional strength captures community differences in *commitment to marriage*. This index combines two items that were constructed by aggregating responses to GSS questions from 1974 to 1977 about current marital status and views on divorce laws: the percentage of respondents currently married and the percentage who indicated support for laws making it more difficult to divorce ($\alpha = .62$). Consistent with previous research (e.g., Maume and Lee, 2003), we use data on voting and welfare assistance as indicators of the degree to which the polity is organized in ways that might regulate how people respond to culturally induced pressures to pursue economic success goals. Specifically, we include an index of *voter participation* ($\alpha = .90$), which combines the percentage of persons aged 18 years and older registered to vote in 1976 and the percentage of registered voters who voted in the 1976 Presidential election (Inter-University Consortium for Political and Social Research (ICPSR), 1991, 1995), as well as an index of *welfare assistance* ($\alpha = .64$) that combines the percentage of poor families receiving welfare and the average monthly welfare payment per poor person, adjusted for local cost of living (see Hannon and DeFronzo, 1998). The two welfare items used in this index were estimated for 1976 by interpolating county census data from 1970 and 1980.

Finally, we incorporate measures of the strength of two additional institutional spheres not emphasized in IAT but highlighted in several recent empirical investigations (e.g., Maume and Lee, 2003; Messner, Baumer, and Rosenfeld, 2004; Rosenfeld, Messner, and Baumer, 2001). Specifically, we use data from the 1970 and 1980 Census of Churches to interpolate the 1976 *civically engaged church adherence rate* for our sample units (Glenmary Research Center, 1973, 1981). And, consistent with past research, we measure levels of *social capital* for our sample units by combining indicators of community participation with indicators of social trust (Messner, Baumer, and Rosenfeld, 2004; Paxton, 1999; Putnam, 2000; Rosenfeld, Messner, and Baumer, 2001). We combined four measures from the GSS for the period covering 1973–1977 and aggregated them within sample units to construct an index of social capital that combines the percentage of respondents who indicate that most people can be trusted, the percentage who say that most people try to be fair, the percentage who say that most people try to be helpful, and the per capita number of groups and associations to which respondents belong ($\alpha = .84$).

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CONTROL VARIABLES

We also consider several other potentially important variables in our analysis. Although we could not find any statements in the original articulations of Merton's theory or IAT that claim that the causal processes implied are *net of other factors*, these anomie perspectives obviously should be tested against plausible alternative models; therefore the models we estimate incorporate measures directed at capturing key concepts that are emphasized in some of the most prominent alternative aggregate-level theoretical perspectives (e.g., routine activities theory and social disorganization theory) as well as other known correlates of crime (e.g., Kposowa, Breault, and Harrison, 1995; Land, McCall, and Cohen, 1990). The controls include the mean number of hours that residents spend watching television in a typical day, population structure (an index that combines logged population size and logged population density), the number of police officers per 100,000 residents, structural disadvantage (an index that combines the percentage of residents who are black and the percentage of families with children headed by a female), the percentage of individuals aged 16 to 34 years, and a dummy variable that distinguishes sample units located in the south from those located elsewhere. The inclusion of these variables provides a conservative test of the hypothesized links outlined in figure 2.¹²

ANALYTICAL STRATEGY

We use ordinary least squares to examine the effects of the explanatory and control variables on instrumental crime rates. Our analysis proceeds in the following manner. We begin by briefly describing descriptive statistics and bivariate correlations for the sample and measures employed in the study. We then estimate a series of regression models that examine the empirical predictions outlined in figure 2. As the figure illustrates, the key empirical predictions of interest in the regression models are multiplicative relationships, specifically two-way and three-way statistical interactions. To minimize concerns about multicollinearity and to enhance the interpretability of the interactions estimated in our regression models, each predictor variable hypothesized to form multiplicative relationships was mean centered (Aiken and West, 1991; Jaccard and Turrissi, 2003). Our initial focus in the multivariate analysis is on testing for the hypothesized two-way interaction between the level of commitment to monetary goals

12. The measure of television viewing was created by aggregating GSS data for 1975–1977 within sample units, and the indicator of police strength was constructed by aggregating agency-level data from the 1975 Census of Law Enforcement Agencies. The other control variables (save for region) were estimated for 1976 by interpolating from 1970 and 1980 decennial census data.

and the level of weak commitment to using legitimate means for pursuing monetary success. The empirical expectation here is for a statistically significant positive coefficient for the interaction term, which signifies that the effect of each component of the interaction is enhanced given higher levels of the other. Subsequent models are directed at testing for the three-way interactions specified in figure 2. Specifically, we evaluate whether factors such as limited access to legitimate opportunities, indicators of low and unequal levels of educational and economic attainment, and measures of noneconomic institutional strength condition the potential crime-elevating interactive effects of a high degree of commitment to monetary goals and a weak commitment to using legitimate means to do so. Based on our interpretation of the classic and contemporary anomie theories under review, we expect significant positive coefficients for the three-way interactions involving the availability of legitimate opportunities and the indicators of low achievement and high inequality, as well as significant negative coefficients for three-way interactions involving the indicators of noneconomic institutional strength.

RESULTS

Before turning to the regression results, it is instructive to consider the descriptive statistics for the key variables represented in our hypotheses, which are presented here in table 1.¹³ The average rate of instrumental crime (robberies, burglaries, larcenies, and auto thefts) for the 77 areas represented in our sample is 5,348 per 100,000 residents, which is very similar to the national rate for this period (U.S. Department of Justice, 1978). Considerable geographic variation exists in instrumental crime rates, however, with some areas experiencing just over 200 instrumental crimes per 100,000 and others more than 9,500 per 100,000. The geographic areas in our sample also exhibit variation on key explanatory variables examined in the study. For instance, more than a quarter (29.6 percent) of persons across these areas agreed that “next to health, money is the most important thing,” which we use as an indicator of relative commitment to monetary success, but this sentiment varied across places from about 15 percent to 49 percent. Similarly, in the average area, nearly one quarter (23.3 percent) of persons expressed a weak commitment to using legitimate means to pursue monetary success as indicated by their agreement that “there are no right or wrong ways to make money, only hard and easy ways,” but agreement with this statement ranged from under 5 percent to more than 41 percent across our sample areas. The indicators of the availability of

13. To conserve space, we do not present results for the control variables in any of the tables (results available on request).

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Table 1. Descriptive Statistics for Dependent Variable and Explanatory Variables (N = 77)

Dependent Variable	Mean	SD	Minimum	Maximum
Instrumental Crime Rate (per 100,000)	5,347.84	2,071.51	209.81	9,592.92
Explanatory Variables				
Value Commitments				
Commitment to monetary success				
% agreeing that next to health, money is most important	29.60	8.04	15.22	48.84
Weak commitment to legitimate means				
% agreeing there are no right or wrong ways to make money	23.33	7.83	4.55	41.30
Structural Realities				
Limited job availability	.96	.10	.66	1.37
Work force to jobs ratio	.00	4.32	-8.79	13.88
Low educational and economic attainment ^a	13.86	4.64	4.77	29.58
% of persons 16-19 not in school or a high-school graduate	39.71	9.88	24.31	68.86
% who did not graduate from high school	5.73	2.07	3.06	14.00
% of civilian labor force unemployed	76.95	4.73	63.36	85.86
% employed in nonmanagement/nonprofessional jobs	13.10	6.13	6.02	43.76
% of families with incomes below the poverty line	2.54	.12	2.15	2.98
Mean self-reported social class (4 = lower class, 1 = upper class)	.00	1.80	-3.09	7.25
Educational and income inequality ^a	.35	.03	.30	.47
Income Gini	.25	.03	.21	.33
Education Gini				
Strength of Noneconomic Social Institutions				
<i>Educational</i>				
% government expenditures on education	50.45	7.70	37.19	75.83
Pupils per teacher	21.00	5.30	15.23	56.08

Table 1 (cont.)

	Mean	SD	Minimum	Maximum
<i>Familial</i>				
Time spent with family ^a	.00	2.52	-5.82	6.93
% who spend several evenings a month with parents	47.47	22.49	.00	100.00
% who spend several evenings a month with siblings	34.15	15.23	.00	75.00
% who spend several evenings a month with other relatives	55.30	9.46	34.43	80.00
Commitment to marriage ^a	.00	1.70	-3.69	4.64
% currently married	68.08	9.04	51.79	89.47
% who support laws making it more difficult to divorce	48.95	10.72	26.67	75.00
<i>Political</i>				
Voter participation ^a	.00	1.90	-5.74	4.54
% 18 and older registered to vote	70.08	12.06	33.79	99.01
% of registered voters who voted in 1976 Presidential election	53.67	8.95	29.23	77.68
Welfare assistance ^a	.00	1.73	-2.67	5.65
% of poor families receiving welfare	6.80	2.47	3.24	15.01
Average monthly welfare payment per poor person	134.70	24.84	96.28	196.60
<i>Religious</i>				
Civically engaged church adherence rate	19.19	9.14	6.00	56.32
<i>Community</i>				
Social capital ^a	.00	3.30	-8.39	7.14
% who say most people can be trusted	43.05	11.38	21.82	69.64
% who say most people try to be fair	62.03	10.77	32.69	88.89
% who say most people try to be helpful	52.56	10.31	24.56	73.02
Mean self-reported number of group memberships	1.86	.38	1.03	2.92

^aMulti-item standardized additive scale that combines the indicators listed directly below it.

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employment opportunities, economic attainment and inequality, and commitment to and participation in noneconomic institutions exhibit substantial variability across places as well. It remains to be seen, however, whether these factors affect instrumental crime in the manner posited by Merton and by Messner and Rosenfeld.

The bivariate correlations displayed in table 2 indicate a significant positive, albeit relatively weak, linear relationship between levels of commitment to monetary success and weak commitment to legitimate means ($r = .279$, $p < .05$). Neither of these variables exhibits a significant bivariate linear association with instrumental crime rates, which is perhaps not surprising in light of the strong theoretical emphasis on their presumed interactive effects. The indicator of job availability, which has not been used in past crime research as far as we know, is not related significantly to levels of instrumental crime or the other economic indicators, low economic attainment and economic inequality. The latter measures are strongly correlated as expected, and they yield significant inverse relationships with instrumental crime rates, presumably because such conditions reflect limited opportunities for instrumental crime.¹⁴ An additional noteworthy feature of the bivariate associations shown in table 2 is that many indicators of noneconomic institutional strength yield significant negative relationships with instrumental crime rates. Below, we examine whether these indicators also condition any observed interactive effect of commitment to monetary success and weak commitment to legitimate means, as implied by Messner and Rosenfeld (2007).

Tables 3 and 4 present the multivariate regression results that are most central to the theoretical predictions examined in our research. Table 3 displays nonstandardized coefficients and standard errors for five regression models relevant to Merton's anomie theory. Model 1 presents results for the main effects of the explanatory variables, whereas the other models test for the significant interaction effects implied in Merton's theory, beginning with the two-way interaction between commitment to monetary success goals and weak commitment to legitimate means (model 2), followed by models that evaluate hypothesized three-way interaction effects between value commitments and the three indicators of economic conditions highlighted in his work (models 3–5).

Model 1 reveals two noteworthy findings.¹⁵ First, several explanatory

14. Kposowa, Breault, and Harrison (1995) report similar findings for property crime in their comprehensive analysis of county-level crime correlates. We find the more typical positive relationships between these indicators and crime when we substitute homicide rates for instrumental crime rates (results not shown).

15. We tested for homogeneity of error variance using the Breusch–Pagan test (e.g., Greene, 1993); no significant heteroskedasticity was observed. Visual inspection of model residuals showed no indications of significant non-normality. Some

Table 2. Bivariate Correlations for Dependent and Explanatory Variables ($N = 77$)

Variable	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
(1) Instrumental crime rate	—	.158	.058	-.065	-.482*	-.297*	-.527*	.035	-.508*	-.621*	-.234*	-.364*	-.465*	-.016
(2) Commitment to monetary success		—	.279*	.211	.034	.133	.015	.013	.044	-.061	-.134	.012	-.149	-.143
(3) Weak commitment to legitimate means			—	.187	-.136	.017	-.008	-.075	-.035	.016	-.020	-.201	.010	.004
(4) Limited job availability				—	.178	.130	.202	-.011	.161	-.040	-.038	.057	-.276*	-.204
(5) Low educational and economic attainment					—	.730*	.463*	-.024	.539*	.483*	-.090	.659*	-.084	-.426*
(6) Educational and income inequality						—	.371*	-.065	.414*	.274*	-.183	.477*	-.161	-.473*
(7) % govt. expenditures on education							—	-.240*	.424*	.358*	.143	.148	.125	-.063
(8) Pupils per teacher								—	.073	.080	-.089	-.084	-.060	-.082
(9) Time spent with family									—	.329*	-.019	.364*	.128	-.230*
(10) Commitment to marriage										—	.226*	.226*	.459*	.136
(11) Voter participation											—	.110	.280*	.433*
(12) Welfare assistance												—	-.146	-.109
(13) Civically engaged church adherence rate													—	.431*
(14) Social capital														—

* $p < .05$, two-tailed test.

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Table 3. Regression of Instrumental Crime Rates on Value Commitments and Structural Realities (*N* = 77)

Independent Variables	(1)	(2)	(3)	(4)	(5)
Commitment to monetary success	39.08 (22.14)	32.64 (20.94)	30.68 (21.69)	24.74 (19.23)	44.63* (20.47)
Weak commitment to legitimate means	3.07 (21.80)	35.11 (23.27)	46.55 (25.55)	36.60 (21.55)	39.08 (23.21)
Limited job availability	608.31 (2061.67)	-580.75 (1981.30)	-1091.75 (2659.05)	-649.43 (1882.26)	-116.87 (1951.22)
Low educational and economic attainment	.02 (94.57)	15.01 (89.08)	15.18 (92.58)	-27.58 (85.11)	-32.84 (84.14)
Educational and income inequality	50.41 (172.89)	-76.97 (168.37)	-108.01 (174.44)	-269.98 (162.80)	-160.74 (160.48)
% govt. expenditures on education	-83.46* (26.59)	-90.41* (25.12)	-90.39* (27.92)	-80.88* (23.47)	-102.12* (25.04)
Pupils per teacher	-14.66 (31.03)	-7.10 (29.29)	3.67 (30.69)	-12.44 (26.83)	-19.54 (27.34)
Time spent with family	-149.13* (74.08)	-151.65 (79.07)	-205.26* (89.63)	-176.96* (74.10)	-187.12* (73.97)
Commitment to marriage	-363.65* (138.46)	-302.80* (131.87)	-323.98* (133.83)	-236.60 (123.57)	-185.74 (129.21)
Voter participation	69.51 (103.03)	77.86 (96.93)	47.67 (101.63)	47.88 (89.02)	85.68 (91.18)
Welfare assistance	-257.30 (166.92)	-177.47 (159.34)	-71.19 (183.66)	12.60 (163.18)	-38.24 (158.63)
Civically engaged church adherence rate	-63.37* (25.45)	-60.50* (23.96)	-51.21* (25.91)	-57.32* (22.46)	-53.71* (22.48)
Social capital	136.74 (74.89)	121.92 (70.61)	146.12 (75.53)	30.72 (73.28)	58.40 (69.88)

Table 3 (cont.)

Independent Variables	(1)	(2)	(3)	(4)	(5)
Commitment to monetary success X					9.11*
Weak commitment to legitimate means				9.52*	(2.87)
Commitment to monetary success X		7.92*	9.08*		
Limited job availability		(2.72)	(3.28)		
Weak commitment to legitimate means X			-38.31		
Limited job availability			(302.68)		
Commitment to monetary success X			407.29		
Weak commitment to legitimate means X			(306.80)		
Limited job availability			-17.06		
Commitment to monetary success X			(28.47)		
Weak commitment to legitimate means X				16.33*	
Limited job availability				(6.13)	
Commitment to monetary success X				-1.68	
Weak commitment to legitimate means X				(6.00)	
Commitment to monetary success X				-1.26	
Weak commitment to legitimate means X				(.76)	
Limited job availability					26.67*
Commitment to monetary success X					(12.51)
Limited legitimate opportunities					2.13
Weak commitment to legitimate means X					(13.66)
Limited legitimate opportunities					-4.11
Commitment to monetary success X					(2.78)
Weak commitment to legitimate means X					
Economic inequality					
R ²	.714	.752	.762	.805	.799

* $p < .05$, two-tailed test.

NOTE: Estimates shown are unstandardized regression coefficients with standard errors in parentheses. The control variables also were included in the estimation of the models shown.

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variables—some of which have not been considered in previous macrolevel crime research—exert significant main effects. Net of other factors, instrumental crime rates were lower in the late 1970s in geographic areas where education comprised a larger share of overall spending, families spent more time together, there was a stronger commitment to marriage, and the rate of adherence to civically engaged religious denominations was higher. Second, and more important for the focus of our research, neither levels of commitment to monetary success nor weak commitment to legitimate means exerts a significant main effect on instrumental crime rates. This finding is not unexpected because, as noted, neither Merton's theory nor IAT predicts main effects for these variables. But they do predict that these variables interact to generate higher levels of instrumental crime, an issue to which we now turn.

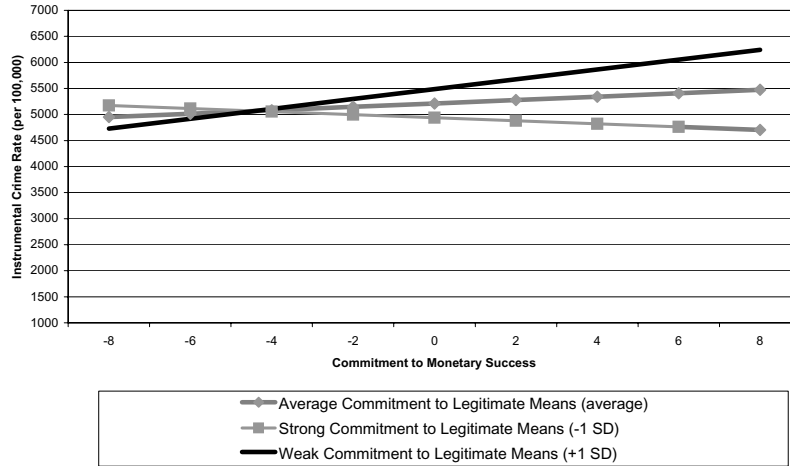
We tested for the hypothesized interaction between commitment to pursue monetary success and weak commitment to legitimate means by adding a variable that represents the product of these measures. As model 2 shows, this estimation reveals a statistically significant interaction effect ($b = 7.92$, $p < .05$) that is in the theoretically expected direction, net of a comprehensive set of other variables.

To illustrate the nature and magnitude of this interaction effect, we used the coefficients in model 2 to compute the relevant simple slopes implied by the interaction (see, e.g., Aiken and West, 1991). Since the theories under review here do not favor either of the two explanatory variables involved in the interaction as a focus or moderator variable, we first computed the simple slopes for the regression of instrumental crime on commitment to monetary success goals at different levels of weak commitment to legitimate means (ranging 1 standard deviation above and below the mean), and then we repeated these steps for computing simple slopes for the regression of instrumental crime on weak commitment to legitimate means at different levels of commitment to monetary success goals. The resulting regression lines are displayed in panels A and B of figure 3. As figure 3 reveals, the effect of each variable on instrumental crime rates is greater at higher levels of the other and, in fact, only the slopes reflected

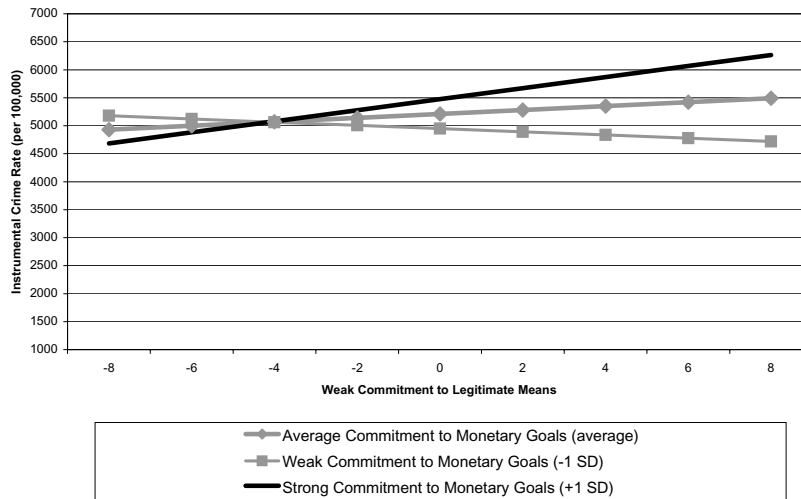
independent variables included in our regression models yield moderate-to-strong correlations, particularly associations between some indicators of economic conditions (e.g., levels of low attainment, high inequality, and the welfare index) and some control variables (e.g., population density and structural disadvantage). An assessment of model variance inflation factors (VIFs) and conditioning indices suggested that these variables could be a significant source of multicollinearity. However, the estimation of several alternative specifications revealed that the conclusions drawn about the effects of the explanatory variables, and most importantly about the two-way and three-way interactions considered in the study, are not at all sensitive to the simultaneous inclusion of these variables.

Figure 3. Predicted Instrumental Crime Rates at Different Levels of Commitment to Monetary Success and Commitment to Legitimate Means

A. Effect of Commitment to Monetary Success on Instrumental Crime



B. Effect of Commitment to Legitimate Means on Instrumental Crime



in the top lines in each figure (when the moderator is set to 1 standard deviation above the mean, which is denoted with the solid black lines) are statistically significant. This interaction indicates that instrumental crime rates were highest in the late 1970s in areas where there was both a strong

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commitment to monetary success and a weak commitment to legitimate means, which is consistent with theoretical expectations derived from the classic and contemporary anomie theories considered in this study.¹⁶

The results presented in the remainder of table 3 (models 3–5) address the question of whether the observed interaction between commitment to monetary success and weak commitment to legitimate means is conditioned by the elements of social structure emphasized by Merton. Empirically, these models test for possible three-way interactions among commitment to monetary success, weak commitment to legitimate means, and the indicators of job availability (model 3), levels of attainment (model 4), and inequality (model 5). As the results show, we find no support for the idea that the instrumental crime pressures emanating from a strong commitment to monetary success and a weak commitment to legitimate means are amplified in the contexts of limited job availability, low levels of educational and economic attainment, and high levels of inequality, as suggested by Merton's anomie theory. It is noteworthy, however, that we find statistically significant two-way interactions involving the indicator of commitment to monetary success goals and both the measure of low levels of educational and economic attainment (model 4, $b = 16.33$, $p < .05$) and the measure of economic inequality (model 5, $b = 26.67$, $p < .05$). We find similar results after dropping the nonsignificant three-way interaction terms in these models. These results suggest that the effect on instrumental crime of strong commitments to monetary success goals is amplified when accompanied by particularly low levels of economic attainment and conditions of high economic inequality. Although not consistent with the predictions we derived above from Merton's writings, as we elaborate in the discussion these findings are on par with other explications of his theory and they affirm some of Merton's comments about the conditional link between crime and adverse economic conditions.¹⁷

16. It is also interesting to note that the estimated effect of this interaction effect without the indicators of noneconomic institutional strength (not shown in tabular form) is 17 percent larger than shown in model 3 ($b = 9.59$), which includes these indicators. This is consistent with Maume and Lee's (2003) suggestion that stronger noneconomic social institutions mediate a nontrivial portion of the effect of anomic conditions on levels of instrumental crime.
17. Merton (1938) also implies that factors such as perceptions of formal punishment risk and the level of subjective financial satisfaction also may serve as moderators of the degree to which a commitment to monetary success goals in a context of weakened commitment to institutionalized means is translated into instrumental crime. In supplementary analyses (not shown), we used police force size and the arrest-to-crime ratio as indicators of the degree of objective risk of detection (e.g., Yu and Liska, 1993) and an indicator of the percentage who claim to be satisfied with their financial circumstances and tested whether these factors moderated the two-way interaction effect central to Merton's theory. These analyses do not support the three-way interactions implied by Merton, but they do reveal

Table 4. Regression of Instrumental Crime Rates on Value Commitments and Participation in and Commitment to Noneconomic Social Institutions ($N = 77$)

Independent Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Commitment to monetary success	30.22 (24.21)	31.20 (21.16)	13.26 (19.82)	33.32 (22.01)	40.63 (22.11)	19.30 (19.79)	25.32 (22.12)	35.70 (21.83)
Weak commitment to legitimate means	38.32 (23.78)	32.27 (23.62)	46.59* (21.47)	36.15 (23.83)	29.43 (23.94)	36.52 (21.98)	32.00 (24.86)	36.40 (24.68)
Commitment to monetary success X Commitment to legitimate means	8.68* (3.09)	8.62* (2.87)	12.12* (2.76)	7.82* (2.84)	9.59* (2.89)	9.01* (2.64)	6.84* (2.93)	8.02* (3.42)
Commitment to legitimate means X <i>Pupils per teacher</i>	.03 (1.17)							
Commitment to monetary success X Commitment to legitimate means X								
% of government spending devoted to education		-.31 (.38)						
Commitment to monetary success X Commitment to legitimate means X			-3.23* (1.11)					
<i>Time spent with family</i>								
Commitment to monetary success X Commitment to legitimate means X				-1.50 (1.64)				
<i>Commitment to marriage</i>								
Commitment to monetary success X Commitment to legitimate means X								
<i>Voter participation</i>								
Commitment to monetary success X Commitment to legitimate means X								
<i>Welfare assistance</i>								
Commitment to monetary success X Commitment to legitimate means X						-5.08* (1.72)		
<i>Civically engaged church adherence rate</i>								
Commitment to monetary success X Commitment to legitimate means X							-0.07 (.39)	
<i>Social Capital</i>								
R^2	.760	.776	.806	.758	.766	.800	.759	.759

* $p < .05$, two-tailed test.
 NOTE: Estimates are unstandardized regression coefficients with standard errors in parentheses. The parameter estimates shown are from equations that also include main effects of all explanatory and control variables as well as the relevant two-way interaction for each three-way interaction.

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We now turn to an assessment of whether indicators of commitment to and participation in various noneconomic social institutions lessen the criminogenic pressures associated with a strong commitment to monetary success and a weak commitment to legitimate means, as suggested by Messner and Rosenfeld's IAT. To explore this issue, we estimated regression models that test for three-way interaction effects involving the two indicators of value commitments and each of the eight indicators of noneconomic institutional strength outlined earlier. To conserve space, we limit our tabular presentation to the key parameters of interest and summarize the results for these estimations in table 4, which includes for each model the main effects of the two value commitment variables, the two-way interaction term that represents the product of these two variables, and the relevant three-way interaction term (the estimations summarized in the table also included the relevant lower order two-way interaction terms and the main effects for all explanatory and control variables).

Table 4 shows that although all but one of the indicators of noneconomic institutional strength yield the expected pattern (i.e., a negative coefficient for the three-way interaction term), only two emerge as statistically significant moderators in our analysis: welfare assistance and time spent socializing with family members. In both cases, the results are consistent with Messner and Rosenfeld's (2007) theoretical arguments for how relatively strong noneconomic institutions can temper the degree to which the combination of high levels of commitment to pursue monetary success and low levels of commitment to legitimate means translate into higher levels of instrumental crime.¹⁸

To illustrate more concretely the nature of these findings, we computed the theoretically relevant simple slopes generated by the three-way interactions involving the indicators of time spent with family (model 3) and levels of welfare assistance (model 6). Given the logic of IAT we focus on demonstrating how these two measures of noneconomic institutional strength condition the slopes of the indicators of commitment to monetary success goals and weak commitment to legitimate means when the latter are relatively high (i.e., +1 and +2 standard deviations above their means) or, in other words, under conditions that are most conducive to high instrumental crime rates according to the results presented above (e.g., figure 3). The estimated simple slopes are displayed in two panels in table 5. Panel A presents the simple slopes for the effects of commitment to monetary success at different levels of weak commitment to legitimate

that police force size reduces the degree to which higher levels of commitment to monetary success translate into higher instrumental crime rates, which is consistent with the spirit of Merton's arguments.

18. None of the two-way interactions involving the indicators of commitment to noneconomic institutions was statistically significant.

means and welfare assistance, and the effects of weak commitment to legitimate means at different levels of commitment to monetary success goals and welfare assistance. Panel B is structured similarly but with the indicator of time spent socializing with family as the higher order moderator variable.

Table 5. Simple Slopes for Three-Way Interaction Among Commitment to Monetary Success Goals, Weak Commitment to Legitimate Means, and Selected Indicators of Noneconomic Strength ($N = 77$)

A. Simple Slopes for Three-Way Interaction Among Commitment to Monetary Success Goals, Weak Commitment to Legitimate Means, and Welfare Assistance					
<i>Effect of Commitment to Monetary Success Goals on Instrumental Crime</i>					
Weak Commitment to Legitimate Means	-2 SD	-1 SD	Welfare Assistance Mean	+1 SD	+2 SD
+1 SD	186.64*	138.24*	89.83*	41.43	-6.97
+2 SD	394.44*	277.41*	160.37*	43.34	-73.70
<i>Effect of Weak Commitment to Legitimate Means on Instrumental Crime</i>					
Commitment to Monetary Success	-2 SD	-1 SD	Welfare Assistance Mean	+1 SD	+2 SD
+1 SD	209.61*	159.31*	109.01*	58.71	8.41
+2 SD	423.15*	302.32*	181.50*	60.67	-60.16
B. Simple Slopes for Three-Way Interaction Among Commitment to Monetary Success Goals, Weak Commitment to Legitimate Means, and Time Socializing with Family					
<i>Effect of Commitment to Monetary Success Goals on Instrumental Crime</i>					
Weak Commitment to Legitimate Means	-2 SD	-1 SD	Time Spent with Family Mean	+1 SD	+2 SD
+1 SD	187.30*	147.72*	108.14*	68.57	28.99
+2 SD	409.28*	306.15*	203.03*	99.90	-3.22
<i>Effect of Weak Commitment to Legitimate Means on Instrumental Crime</i>					
Commitment to Monetary Success	-2 SD	-1 SD	Time Spent with Family Mean	+1 SD	+2 SD
+1 SD	226.77*	185.43*	144.10*	102.76	61.43
+2 SD	454.88*	348.24*	241.60*	134.96	28.322

* $p < .05$, two-tailed test.

The two panels in table 5 tell a consistent story. The effects of commitment to monetary success goals when weak commitment to legitimate means is prevalent (1 and 2 standard deviations above its mean), and the effects of weak commitment to legitimate means when commitment to monetary success goals is strong (1 and 2 standard deviations above its

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mean), dampen significantly as the two higher order moderators (welfare assistance and time spent with family) take on larger values.¹⁹ In other words, higher levels of welfare assistance and more time socializing with family significantly reduce the crime-generating tendencies of a high level of commitment to monetary success and a low level of commitment to legitimate means, which are findings that are consistent with the predictions derived from Messner and Rosenfeld's IAT. In fact, the results reveal that, collectively, a high level of commitment to monetary success goals and a particularly weak commitment to legitimate means (denoted in the table with higher values on the "weak commitment" variable) significantly increase instrumental crime when the indicators of welfare assistance and time with family are average or relatively low, but they have no significant effect on crime when these indicators are above average.

DISCUSSION

We derived and examined several empirical predictions about spatial variation in instrumental crime rates contained in the anomie theories presented by Merton (1938, 1949, 1957, 1964, 1968) and Messner and Rosenfeld (1994, 2007). Our interpretation of these perspectives highlighted the crime-generating effect of a high level of commitment to monetary success goals combined with a low level of commitment to legitimate means for pursuing such goals, and we outlined various factors that have been theorized to condition this effect. Using a unique aggregate-level dataset, our analyses revealed empirical support for a central prediction of classic and contemporary anomie perspectives: Instrumental crime rates are significantly higher when both a relatively high level of commitment to monetary success and a low level of commitment to legitimate means exists. This two-way interaction effect persisted after considering simultaneously several other explanatory variables and controls, and its effect was nontrivial in magnitude. The evidence was mixed regarding whether this effect is moderated by features of the social structure. As predicted, the data indicated that higher levels of welfare assistance and more frequent socializing among families reduce the tendency for this "goals/means" value complex to translate into higher rates of instrumental crime. But several other factors widely believed to play a similar moderating role did not do so as tested in this work.

The key dimensions of social structure emphasized by Merton—limited

19. We compared the simple slopes for high and low values (e.g., +1 and -1 standard deviation from the mean) of the higher order moderators shown in table 5 using a significance test of slope differences for three-way interactions (Dawson and Richter, 2006). In each case, the resulting *t* test indicated that the estimated simple slopes were significantly different ($p < .05$).

and unequally distributed legitimate opportunities—were not found to exhibit the significant moderating role we anticipated from a careful reading of his theoretical writings, at least as measured by limited job availability, low levels of educational and economic attainment, and high levels of educational and economic inequality. For reasons noted above, we expected these indicators of economic conditions to amplify the degree to which a high level of commitment to pursue monetary success goals *and* a weakened commitment to legitimate means translate into higher levels of instrumental crime. We found no support for this implied three-way statistical interaction, instead we found that low levels of educational and economic attainment and high levels economic inequality amplify the degree to which commitment to monetary success goals translates into instrumental crime, regardless of the degree to which members of the population exhibit a weakened commitment to legitimate means.

The discrepancy between our empirical findings and our interpretation of Merton's theoretical argument could be a function of several factors, including the general difficulties in detecting higher order statistical interactions and specific aspects of our study design that add to this challenge (e.g., the relatively small sample size or measurement error). But it is also possible that either Merton overestimated the necessity or importance of weakened commitment to legitimate means under conditions of economic insufficiency or that we overestimated the importance he attributed to this element. As others have noted (Messner, 1988), Merton does at times suggest that instrumental crime will likely be particularly high where there is a strong commitment to pursue monetary success goals and insufficient legitimate opportunities to do so effectively, irrespective of the level of commitment the population may have in using only legitimate means. This position is perhaps best reflected in the initial statement of the theory, where Merton states that, "It is only when a system of cultural values extols, virtually above all else, certain common symbols of success for the population at large while its social structure rigorously restricts or completely eliminates access to approved modes of acquiring these symbols for a considerable part of the same population, that antisocial behavior ensues on a considerable scale" (1938: 680). Merton (1968: 203) later qualifies such statements by explicitly stating that the potential deviance-generating effect of a discrepancy between commitment to monetary success goals and blocked access to legitimate means *presupposes* that individuals have imperfectly assimilated institutionalized means, and as we noted, the basic logic of his modes of adaptation signals a significant and necessary causal role for commitment to legitimate means (our emphasis). Whatever his intentions, though, our empirical findings are consistent with the idea that certain objective economic conditions amplify the "pressures" toward instrumental crime created by a strong commitment to pursue monetary

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success goals. Furthermore, the economic conditions that seem to matter most are actual (absolute and relative) levels of attainment rather than the mere availability of employment opportunities, although perhaps a finer measure of the latter, such as the availability of jobs for low-skilled workers, which could not be constructed from available data, would yield a different pattern.

The significant two-way interactions we observed between the indicator of high levels of commitment to monetary success goals and the measures of low levels of attainment and high levels of inequality, respectively, also have relevance for Merton's specific comments on the expected association among crime rates, poverty, and other indicators of economic disadvantage. There is a long tradition of research on the link between economic disadvantage and crime rates, and the findings have been somewhat inconsistent. There are a variety of potential reasons for this inconsistency, including estimation issues (e.g., Land, McCall, and Cohen, 1990), but one possibility foretold by Merton (1938) long ago is that the effects on crime of poverty and other indicators of limited opportunity, such as inequality, may be conditioned by the value commitments of a population. In particular, writing shortly after the Great Depression, Merton (1938: 681) noted that "Poverty as such, and consequent limitation of opportunity, are not sufficient to induce a conspicuously high rate of criminal behavior. Even the often mentioned 'poverty in the midst of plenty' will not necessarily lead to this result." Rather, Merton goes on to argue that the conditions of economic disadvantage yield higher levels of crime mainly when they are accompanied by a high level of commitment to monetary success goals. The two-way interaction effects revealed in models 4 and 5 of table 3 are consistent with this prediction. This finding is relevant for our understanding of the role of economic disadvantage in generating higher levels of crime, and it also suggests a possible reason why the effects of economic disadvantage on crime may be contingent on the sample or era in which they are estimated.

Our findings for the moderating role of some noneconomic social institutions are in-line with empirical expectations derived from institutional anomie theory. Drawing on the insights of Esping-Andersen (1990), Messner and Rosenfeld (1997) suggest that more generous social welfare programs limit total dependence on the market for material well-being and tend to provide some insulation from criminogenic pressures generated by cultural prescriptions to pursue monetary success by any means necessary. Presumably this result is because welfare assistance represents a legal mechanism through which to satisfy culturally valued goals of acquiring money, which may lessen the need to pursue illegal avenues to do so (Hannon and Defronzo, 1998). Although our research cannot evaluate

precisely why greater levels of welfare assistance play the observed moderating role, the results do add to a growing body of evidence that more generous welfare policies can mitigate the potentially criminogenic consequences of heightened economic pressures (e.g., Hannon and Defronzo, 1998; Maume and Lee, 2003; Messner and Rosenfeld, 1997; Savolainen, 2000). This pattern of findings presents an intriguing policy dilemma given recent research showing that escalations in the prevailing crime-reduction strategy in the United States—imprisonment—are associated with reductions in the nation's social welfare program (Beckett and Western, 2001; Stucky, Heimer, and Lang, 2005). The evidence is mounting that both of these public policy strategies may yield crime reduction, but given the growing appreciation for the collateral costs of mass imprisonment, perhaps it is time to reconsider the current policy balance, particularly in light of contemporary trends of escalating imprisonment rates (Harrison and Beck, 2005) and declining welfare benefit rates (Somers and Block, 2005).

Our findings for the moderating role of more frequent socializing with family members also are consistent with the central arguments of IAT. Messner and Rosenfeld (2006: 86–87) suggest that a strong commitment to, or high value placed on, noneconomic social institutions such as the family reduces the likelihood of illegitimate responses to culturally induced pressures for achieving monetary success by promoting the transmission of prosocial norms about the virtues of pursuing monetary success goals only through legitimate means and by increasing exposure to external social controls and social support (see also Cullen and Wright, 1997; LaFree, 1998). The results presented here are supportive of this reasoning, although we cannot rule out plausible alternative interpretations. Specifically, from a routine activities/opportunity theoretical perspective, more frequent socialization with family members is likely to increase guardianship of potential residential crime targets and to reduce personal exposure to situations conducive to property crimes such as robbery and larceny (e.g., Cohen and Felson, 1979). It is also possible that more frequent socializing with family members in an area impedes the development of subcultures organized to support illegitimate enterprises (e.g., Cloward and Ohlin, 1960). Whatever the process implied, one implication of our results is that efforts to facilitate more frequent contact between families that are increasingly separated geographically and by the day-to-day demands of a complex society may help to reduce levels of instrumental crime significantly. Messner and Rosenfeld (2006: 112) advocate a substantial expansion of family-friendly policies and benefits (e.g., paid family leave, flexible work schedules, or employer-provided child care) that reduce the degree to which the family is subjugated by the economy and that provide “opportunities to devote more time and energy to exclusively family concerns.” The results of our research support the idea that such

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policies would contribute significantly to a comprehensive crime control policy.

None of the other indicators of noneconomic institutional strength considered (i.e., educational spending, pupils per teacher, commitment to marriage, voter participation, civically engaged church adherence, and social capital) was found to perform the hypothesized moderating role outlined by Messner and Rosenfeld. Again, this result could be a function of the data used for our study, and we caution against drawing definitive conclusions until additional research weighs in. But it is plausible that these other institutions may not be as important for regulating culturally induced pressures to engage in illegitimate activity as IAT suggests. Whereas higher levels of welfare support provide a direct means to bolster one's efforts to accumulate financial resources and the family is a particularly vital social institution that is well suited to provide the kinds of internal and external social control and social support needed to regulate behavior, the other institutions highlighted by Messner and Rosenfeld provide more temporary attachments for individuals, are arguably less central to their day-to-day lives, and are probably far less influential in shaping how people respond to culturally induced pressures.

It would be useful for future research to address in more detail these and other intricacies of classic and contemporary anomie theories. Several basic questions remain unanswered about concepts, measurements, and implied causal linkages in these perspectives that might be resolved by additional efforts to explicate the models in precise terms and by discussions about how best to evaluate the models. The meaning of some concepts, for example, seems to be taken for granted when, in actuality, their meaning is fairly elusive (e.g., What does "access" to legitimate opportunities really mean?). And although almost everybody in the field probably would be able to recite the basic stories of Merton's anomie theory and IAT, there seems to be little by way of formal efforts in the literature to translate these stories into precise causal models that can be digested, modified, and agreed on in theory so that we will know when a given study design is appropriate and how to assess the relevance of empirical results. More clarification of the complex arguments and additional work on translating the largely discursive statements into precise and testable causal models would be useful. So would additional empirical work that evaluates some of the other research puzzles contained in Merton's and Messner and Rosenfeld's anomie theories, which could not be explored with the data used for our study (e.g., the factors that shape the assimilation of cultural values and how this process varies by key demographic attributes), as well as research that reconsiders the linkages examined in our study with alternative measures, data sources, and samples. Although we feel that the aggregate data used here were suitable for a preliminary

assessment of some core predictions contained in Merton's theory and IAT, the key data source (the aggregate-level version of the GSS) was not specifically designed for this purpose, the units of analysis are relatively large and heterogeneous, and the relevant data were available only for the mid-to-late 1970s. Thus, efforts to replicate our results with alternative data sources that contain multiple measures of key concepts would be highly useful for advancing our understanding of how social organization is linked to crime rates.

Overall, our study provides support for some aspects of the macrolevel anomie theories developed by Merton and Messner and Rosenfeld, but it also points to the need for refinements to these perspectives. In particular, given our interpretations of the two theoretical models and our findings, it seems that a fuller integration of these models would be profitable. Messner and Rosenfeld (2007) make a significant contribution to the theoretical literature by broadening Merton's conceptualization of social structure to include relevant noneconomic social institutions, and our findings hint that these additions are meaningful empirically. But our results also affirm the importance of bringing back in the stratification system in a meaningful way if we are to fully understand the anomic tendencies of our society that make the vitality of noneconomic institutions so important. A model that integrates insights from Merton and Messner and Rosenfeld would better capture the motivational element of anomie theories by incorporating economic circumstances that amplify the degree to which culturally assimilated values are more apt to translate into criminal behavior, while also attending to the many social forces that can regulate these motivational pushes. A model that integrated these two anomie perspectives would therefore be more "sociologically" complete than either one is alone.

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Eric Baumer received his PhD degree in sociology from the University at Albany, State University of New York, in 1998 and is currently an associate professor in the Department of Criminology and Criminal Justice at the University of Missouri—St. Louis. His research is concerned primarily with how social structural and cultural features of communities affect individual behavior. He has examined this issue empirically in multilevel studies of the influence of neighborhood characteristics on individual-level outcomes, in macrolevel studies of urban crime levels and trends, and in case studies of crime and social control in Iceland, Malta, and Ireland.

Regan Gustafson is a doctoral candidate in the Department of Criminology and Criminal Justice at the University of Missouri—St. Louis. Her primary research interests include communities and crime, with an emphasis on rural communities, criminological theory, and collateral consequences.