

International Journal of Conflict and Violence

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International Journal of Conflict and Violence – IJCv

The International Journal of Conflict and Violence (IJCv) is a peer-reviewed periodical for scientific exchange and public dissemination of the latest academic research on conflict and violence. The subjects on which the IJCv concentrates have always been the subject of interest in many different areas of academic life. Consequently, the journal encompasses contributions from a wide range of disciplines including sociology, political science, education, social psychology, criminology, ethnology, history, political philosophy, urban studies, economics, and the study of religions. The IJCv is open-access: All text of the IJCv is subject to the terms of the Digital Peer Publishing Licence. The IJCv is published twice a year, in spring and in fall. Each issue will focus on one specific topic while also including articles on other issues.

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Editorial

Letter from the editors

We are pleased to announce a number of additions to the Journal's Advisory Board. We warmly welcome Julia Eckert (Max Planck Institute for Social Anthropology, Halle/Saale), Barbara Krahé (University of Potsdam), Gary LaFree (University of Maryland), and Loïc Wacquant (University of California, Berkeley). We are sure their expertise will provide valuable inputs for the journal's future work and interdisciplinary approach.

This time—as advertised in the spring issue—the focus section is on the topic of anomie/anomia. We would like to thank the guest editors, Steven F. Messner (University of Albany, New York) and Helmut Thome (Martin Luther University, Halle-Wittenberg) for the very fruitful and productive collaboration, and the impressive collection of papers they have put together.

October 2008

Wilhelm Heitmeyer Douglas S. Massey Steven F. Messner James Sidanius Michel Wieviorka

Guest Editorial

Steven F. Messner, University at Albany, State University of New York, United States
Helmut Thome, Martin-Luther-University, Halle-Wittenberg, Germany

It is surely no overstatement to claim that the concepts of “anomie” and “anomia” permeate much contemporary scholarly and public discourse about crime, violence, and other forms of problematic behavior. At the time of writing (late September 2008), a Google search of “anomie” yielded about 590,000 entries. The results for its individual-level counterpart, “anomia,” were close behind at about 537,000 entries. This special issue of the *International Journal of Conflict and Violence* features efforts to apply these concepts in novel and creative ways to understand the social sources of crime and violence at multiple levels of analysis.

The first paper, by Messner, Thome, and Rosenfeld, is a theoretical essay focused on a relatively recent representative of the anomie perspective—“institutional-anomie theory” (IAT). The authors set out to hone this theoretical approach by clarifying the formal conceptualization of “institutions” and explicating more fully the interconnections among institutional structures, fundamental cultural and normative orientations in a society, and levels of criminal offending, with a particular focus on violent crimes. They argue that modern societies with high levels of criminal violence are likely to be characterized by a disintegrative form of individualism, economic dominance in the institutional order, and tenuous moral authority of the norms. The authors also seek to integrate the macro-level arguments of the theory with processes at the level of individual action. They theorize that the risks of committing acts of criminal violence (as well as other forms of criminal offenses) will be high for actors who prioritize economic roles over non-economic roles, who are relatively insensitive to the moral status of the means of action, and whose performance of economic roles tends to be “disembedded” from social relationships more generally. The authors conclude by highlighting issues in need of further theoretical elaboration, including the formulation of an institutional account for distinctive punishment practices in societies with varying cultural and structural characteristics.

The paper by Bjerregaard and Cochran addresses a vexing problem confronting researchers who attempt to conduct empirical analyses informed by institutional-anomie theory, namely, how to operationalize the core concept of “anomie.” The authors argue that the distinctive prediction of the theory is that high levels of anomie should be generated when the economy allows for the accumulation of great wealth, open competition is emphasized, and yet for many people the social structure restricts access to the legitimate means of accumulating wealth. They propose that gross domestic product (capacity to accumulate wealth), an index of economic freedom (emphasis on open competition), and the Gini coefficient of income inequality (obstacles to legitimate means) can serve as measures of these conditions, and they hypothesize that homicide rates should be predicted by the combination of these factors—a three-way statistical interaction. The results of their multivariate regression analyses based on a cross-national sample are consistent with their hypothesis. The three-way product terms yields the expected positive effect on homicide rates net of control variables, indicating the promise of their methodological approach for cross-national study of anomie.

The next paper, by Frerichs, Münch, and Sander, takes the “classic” (Durkheimian-Mertonian) and the “institutionalist” (IAT) readings of the anomie concept as its points of departure and seeks to widen them into a macro-sociological framework which takes into account specific features of societal transformations that characterize the “age of globalization.” The authors interpret the first dimension of the anomie concept as the conflict between promised cultural inclusion (based on individual achievement) and structurally induced exclusion (inexorably perpetuated underachievement). This interacts

with the second dimension—the precarious and often unbalanced interplay and performance of central societal institutions: state, market, and family. A third dimension is placed on the level of global development: the tension between cross-national convergence regarding the “cult of the individual” and the persisting divergence with respect to institutional realities. For their empirical analysis the authors rearrange traditional indicators of various facets of welfare regimes in order to respond adequately to the post-welfarist transformations and to avoid any sort of “methodological nationalism.” They develop a set of hypotheses which they test with pooled time-series cross-sectional data compiled for twenty developed countries for the period 1970–2004. Several variants of multiple regression models and estimation strategies are applied, with robbery rates as the major dependent variable (which the authors consider to be more compellingly related to the anomie concept than homicide rates). The results across models and strategies are partially consistent, partially inconsistent; some of the consistent results challenge hitherto widely accepted hypotheses. In any case, these analyses and their outcomes are provocative and will certainly stimulate lively discussions about theoretical assumptions and the appropriate methodological devices for testing them.

Stults and Baumer apply variants of the anomie perspective to explain macro-level variation in violent crime, basing their empirical analyses on a sample of sub-national units from the United States. Drawing upon both Merton’s anomie theory and institutional-anomie theory, they hypothesize that an important source of high rates of lethal violence is an “unbalanced pecuniary system.” This refers to a situation wherein high levels of commitment to monetary success goals are combined with low levels of commitment to legitimate means. They further propose an original analytic model of intervening effects to explain this association. Specifically, they hypothesize that an unbalanced pecuniary system affects homicide rates indirectly by increasing levels of firearm prevalence, drug market activity, and property crime, and also by amplifying the effects of these factors on lethal outcomes. They assess these hypotheses with data for counties and county clusters that comprise the sampling frame for the U.S. General Social Survey (GSS). Their results indicate that the indicator of an unbalanced pecuniary system is indeed positively related to homicide rates and that this effect is mediated by higher rates of property crime and higher levels of drug activity. The hypotheses about indirect effects through firearm prevalence and conditioning effects are not supported. Overall, these analyses illustrate the utility of applying anomie theories to explain macro-level variation in different forms of criminal offending in an integrated framework.

Cross-national and temporal variation in crime rates can only be explained with reference to features of culture and social structure that vary correspondingly. But in order to understand individual behavior that accumulatively makes up crime rates, one has to construct hypotheses that relate (anomic) macro-social factors to individual dispositions and interpretations (in this context often summarized under the label of “anomia”). The last two papers open up particularly promising avenues towards achieving this goal.

The paper by Legge, Davidov, and Schmidt is based on a representative panel survey conducted in Germany in three consecutive years between 2002 and 2004. The authors concentrate their analysis on a specific dimension of “anomia”—cognitive disorientation, i.e. the experience of meaninglessness arising from a generalized inability to make sense of what is happening in the larger social environment and to evaluate its impact upon one’s personal life. (Possible connections with normative disorientation are briefly discussed but not systematically studied here.) The study examines the impact that education, age, sex, region (eastern/western Germany), and political orientation exert upon the level of anomia and its change over (an admittedly short period of) time. The authors use the Latent Growth Curve Model supplemented by multiple group comparisons as their main instrument in statistical analyses. This highly potent statistical tool allows the researcher, among other things, to evaluate how the impact of any independent variable may differ with regard to level as opposed to change scores, and it helps to identify and explain inter-individual differences in the intra-individual changes of the dependent variable. So, for example, the empirical findings show that all the socio-demographic variables, including political orientation, are strong predictors of the initial level of anomia but not of its development over time. Though the level of anomia in eastern Germany is persistently higher than in western Germany, it increased more in western Germany, particularly among people with a right-wing political orientation.

The final contribution by Burkatzki directly tackles the question about the way in which a high degree of personal involvement in market activities contributes to undermining commitment to moral norms. He distinguishes three norm-related orientations: communitarianism (attachment to norms of mutual assistance and solidarity), nomocentrism (commitment to law-abiding behavior), and economism (strong aspirations to achieve economic gains). From information collected by means of vignette-based survey questions he then derives a typology of five categories of people who differ in the way in which they combine these three dimensions into unique patterns, for example, radical versus norm-oriented market activists or post-conventional communitarians. Burkatzki also discusses similarities and differences between his typology and Merton’s typology of (five) individual forms of adaptation to anomic

conditions. The analysis proceeds by establishing empirical connections (1) between orientation patterns of actors and their willingness to realize their own advantages by illegal or illegitimate means, (2) between the degree of a person's involvement in the market (measured, for example, by his or her functional employment status) and his or her norm-related orientations. The results of the analyses basically conform to expectations derived from anomie-theory, but they also point to some methodological problems that still need to be resolved. The author also offers some interesting observations on various forms of "corporate violence" that are likely to be fostered by normative orientations represented by radical market activists.

Considered collectively, these papers demonstrate that research on anomie/anomia, though still taking the formulations and insights from Durkheim and Merton as their unifying point of departure, has branched out along an array of new avenues leading to conceptual expansions and refinement, to reformulated interlinkages with diverse theoretical approaches, and to novel methodological strategies. We hope that the articles presented in our focus section may also stimulate international cooperation—particularly in the collection of larger and more differentiated data sets that provide more significant indicators reliably representing theoretical concepts and allowing for multi-level analyses that differentiate and integrate structural and developmental effects.

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Institutions, Anomie, and Violent Crime: Clarifying and Elaborating Institutional-Anomie Theory

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A limited but accumulating body of research and theoretical commentary offers support for core claims of the “institutional-anomie theory” of crime (IAT) and points to areas needing further development. In this paper, which focuses on violent crime, we clarify the concept of social institutions, elaborate the cultural component of IAT, derive implications for individual behavior, summarize empirical applications, and propose directions for future research. Drawing on Talcott Parsons, we distinguish the “subjective” and “objective” dimensions of institutional dynamics and discuss their interrelationship. We elaborate on the theory’s cultural component with reference to Durkheim’s distinction between “moral” and “egoistic” individualism and propose that a version of the egoistic type characterizes societies in which the economy dominates the institutional structure, anomie is rampant, and levels of violent crime are high. We also offer a heuristic model of IAT that integrates macro- and individual levels of analysis. Finally, we discuss briefly issues for the further theoretical elaboration of this macro-social perspective on violent crime. Specifically, we call attention to the important tasks of explaining the emergence of economic dominance in the institutional balance of power and of formulating an institutional account for distinctive punishment practices, such as the advent of mass incarceration in the United States.

1. Introduction

The influence of the anomie perspective in criminology has risen and fallen over the past seven decades or so. Merton’s well known formulation, which was originally published in 1938, dominated sociological inquiry into crime during the 1950s and 1960s, only to be relegated by some to the dustbin of criminological history (Hirschi 1969; Kornhauser 1978; see also Messner and Rosenfeld 2007, 12–14). However, researchers have subsequently responded to critiques of earlier formulations of anomie theory, crafted expanded versions of the theory, and applied the theory in novel ways. To paraphrase Mark Twain, developments in the discipline in the latter years of the twentieth century and the beginning

of the twenty-first century suggest that the earlier reports of the death of anomie theory had been greatly exaggerated.

One effort to revive and revitalize the anomie perspective in criminology has been the formulation of “institutional-anomie” theory (hereafter IAT). The core arguments of this approach were initially presented as part of an explanation of the comparatively high rates of serious crime in the United States (Messner and Rosenfeld 2007). Over time, these arguments have evolved into a theoretical framework with more general applicability. The distinguishing feature of IAT is its principal focus on culture and social structure as manifested in social institutions. Following in the spirit

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of Durkheimian sociology, IAT is built upon the underlying premise that the “normal” levels and forms of criminal activity in any society reflect the fundamental features of social organization.

In this paper, we seek to further advance the IAT research program by clarifying key concepts, elaborating the arguments about the impact of social organization on levels of violent crime, and extending the scope of the theory. We begin with a formal treatment of the core concept of “institutions,” explaining how it has been derived from and expands upon the classic conceptualization employed by Talcott Parsons (1990 [1934]).¹ This exercise in conceptual clarification is fruitful for two reasons. One, it highlights the central role of cultural values in understanding institutional dynamics. We take this important insight as a point of departure for explicating in greater detail than in previous statements of the theory the kinds of fundamental value orientations that are theorized to be conducive to pervasive criminal violence in the advanced societies. Two, our explication of the concept of “institutions” draws attention to some of the individual-level processes upon which IAT implicitly rests. Concrete human actors ultimately produce and reproduce the institutional dynamics that operate at the macro level. A comprehensive statement of IAT thus requires identification of the linkages between the level of social systems and the level of individual action. By elaborating cultural processes and identifying the multilevel linkages implicit in IAT, we can uncover new “puzzles” that might stimulate research on violent crime in the future.²

2. The Concept of “Social Institutions”

As noted, IAT adopts a conceptualization of “institutions” that is derived from Parsons’ work on general sociological theory (see also Bellah et al. 1991, 287–306) and is compatible with more recent applications in other social science disciplines. Parsons explains that two valid approaches to the study of institutions can be differentiated: the “subjective” and the “objective” (Parsons 1990 [1934], 319). The

former adopts the viewpoint of the actor and is essential for understanding individual-level behavior. The latter refers to the perspective of the sociological observer and is particularly relevant to the characterization of the institutional order in society at large.

From the subjective point of view, institutions play an influential role in guiding “action,” which generally involves some kind of “means-ends” relationship.³ Actors formulate goals (ends), and they choose “suitable” means (or ways) of obtaining these goals. The “suitability” of the means can be determined with reference to a specified standard of rationality. The precise standard of rationality invoked differs depending on the nature of the ends. For example, the appropriate standards for assessing the rationality of empirical ends (e.g., securing resources) differ from those that pertain to transcendental ends (e.g., attaining salvation).

Individual actors have multiple ends and multiple sets of means that involve “complex ‘chains’ of means-ends relationships, so constituted that the ‘end’ of one sector of the chain is a means to some further end” (Parsons 1990 [1934], 322). Moreover, for social order to exist, different individuals must coordinate their actions. Parsons assumes that this can only occur if there is an appreciable degree of integration of ultimate ends among those in a social system. In other words, he assumes that a concrete, on-going society presupposes a value system that is to some meaningful degree shared or common to the members of that society. Of course, not all people embrace every single value, and even those who accept the values do not always act in ways compatible with them. Nevertheless, Parsons maintains that a situation lacking any agreement on ultimate values would be highly unstable and would likely lead to chaos, i.e., the Hobbesian state of nature, the war of all against all.

The common value system is, therefore, the foundation on which social institutions rest for Parsons. The members of society collectively formulate or accept rules, or regulatory

¹ A preliminary effort along these lines can be found in Messner and Rosenfeld (2004).

² See Cole (1975) for a discussion of problem-generation as a key latent function of theories.

³ Parsons has often been accused of overextending the means-ends conceptualization of action, blurring, for example, the distinctive features of habitual or expressive behaviour and

glossing over the human potential for creativity (see, e.g., Joas 1997). In the context of our present discussion we let this matter rest.

norms, that govern the means that are judged to be acceptable in the pursuit of ends. These norms are accompanied by sanctions, and they have an obligatory quality surrounding them; they are in an important sense “coercive” to use Durkheim’s language (1964b [1895]). There are of course a multitude of norms that pertain to different forms of behavior, and it is accordingly useful to conceptualize systems of regulatory norms that pertain to particular kinds of tasks and performances that are commonly differentiated on the basis of functional considerations. These systems of rules or regulatory norms constitute the major social institutions in a society (e.g., the economy, the family, etc.).

Parsons has been legitimately criticized for exaggerating the degree of value consensus in concrete societies and for largely neglecting the role of factors other than institutional norms that can coordinate action and create social order, such as the exercise of raw or “charismatic” power, and considerations of self-interest. Similarly, although he acknowledges a role for “implicit” rules in constraining behavior (1990 [1934], 329), he does not display much appreciation for the extent to which social interactions are infused with taken-for-granted presumptions that have little direct relationship to any ultimate value system. Nevertheless, his analytic framework introduces some highly useful conceptual distinctions for institutional analysis. For example, a common approach to institutions is to equate them with observed patterns of behavior. From this perspective, behaviors that occur with a high degree of regularity are “institutionalized” behaviors. Parsons, in contrast, restricts his conceptualization of institutions to the rules that contribute to the emergence of these regular patterns of behavior. A very similar approach appears in the “new institutionalism” that has emerged in economics, political science, and economic sociology in recent decades. As Douglass North puts it: “Institutions are the rules of the game in a society or, more formally, are the humanly devised constraints that shape human interaction” (1990, 3).

The analytic distinction between the “rules of the game” or institutional norms and concrete forms of behavior is critically important because it allows for an empirical assessment of the role of institutional controls in contrast with the role of other factors. Parsons recognizes that concrete

behaviors are determined by many factors, including the physical environment, biological heredity, and psychological traits (1990 [1934], 320). If institutions are equated with behavioral regularities themselves, it is impossible to isolate the distinctive contribution of institutional factors in the explanation of these behaviors.

Parsons also distinguishes between moral and utilitarian sources of compliance with institutional norms. He theorizes that the primary motive for obeying an institutional norm “lies in the moral authority it exercises over the individual” (1990 [1934], 326). When a norm is imbued with such authority, the actor complies with the norm because the prescribed behavior is “good for its own sake” and is not merely a means to some other end. The moral authority of institutional norms, however, is never perfect. A secondary, utilitarian type of control invariably accompanies the moral type in ongoing societies. This involves a “calculation of advantage” rooted in an appeal to interest, which may take the form of positive advantages on the one hand or disadvantageous consequences on the other.

Shifting from the “subjective” to the “objective” view of institutions, Parsons goes on to argue that institutions themselves can be thought of as constituting a collective system. Each institution has implications for others. In his words, the institutions are inter-related with respect to their mutual “requiredness” (1990 [1934], 332). The norms of a given institution are not compatible with just any kinds of norms in other institutions. Only some kinds of norms would “fit” with others. The degree of fit between institutions can be understood as constituting the degree of “structural integration” of the institutional order. Parsons cites the medieval relations between church and state as an instance of weak structural integration. Each of these institutions “claimed an allegiance which inevitably encroached on the requirements of the other” (1990 [1934], 332).

Parsons identifies an additional feature of the institutional order—its “regulatory integration” (1990 [1934], 332). This refers to the degree to which and the means by which institutional norms govern behavior in practice. In a hypothetical society with perfect regulatory integration, conformity with the norms would be universal and would be brought

about entirely by the moral authority of the norms. Such a hypothetical concept is not intended as a “descriptive category” but as an “ideal type,” a “polar concept” (1990 [1934], 332). Such a society will not exist in the empirical world. At the opposite end of the continuum is a hypothetical society wherein the moral authority of the norms has dissolved. Initially, considerations of self-interest might produce conformity with social norms in such a society, although Parsons anticipates that such a situation would eventually result in a “loss of control even by that means” (1990 [1934], 333). Following Durkheim (1966 [1897]), Parsons uses the term “anomie” to refer to the situation in which the moral authority of the institutional norms has broken down (see also Merton 1964). In essence, a high degree of anomie implies that concrete behavior is no longer “institutionalized” in the sense of being governed by the moral authority of social norms.

In sum, Parsons has put forth a useful, albeit highly abstract, analytic framework for institutional analysis that potentially has wide applicability for understanding social phenomena. Institutions refer to systems of rules intended to control behavior that have the distinctive quality of being “moral,” i.e., rooted in some overarching value system.⁴ Furthermore, processes of institutional control can be understood as operating at dual levels. At the individual level, institutional rules constitute part of the environment confronting actors as they select the means to realize their ends. At the macro-level, institutions form different configurations exerting constraining but also orienting and enabling influences upon the members of society. Though these configurations ultimately arise from and are maintained by individual and collective actions their emergent properties (that need to be theoretically reconstructed) cannot be (fully) “designed” by specific actors.

3. Institutional-Anomie Theory

IAT builds on and adapts this general framework for institutional analysis to explain the specific phenomenon

of crime. In so doing it also draws liberally on Merton’s variant of the anomie perspective (1968:189), incorporating in particular his keen insights about the tendency of considerations of technical expediency to override moral concerns under conditions of extreme anomie. However, whereas Merton places primary emphasis on the stratification system when considering the social structural determinants of anomie, IAT broadens the focus to include other primary institutions of society.⁵

3.1. Bringing Institutions into Criminological Theory

Social institutions are to some extent distinct with respect to the primary activities around which they are organized, which is the basis of conventional classifications of institutions. To illustrate, the system of institutional norms that relates to activities pertaining to the subsistence requirements of human organisms—food, clothing, shelter—is typically labeled the “economy,” though today the economy goes far beyond these minimal requirements. The system of institutional norms that governs behaviors related to the biological reproduction of the species is referred to as the family, and so on (Messner and Rosenfeld 2007; see also Turner 2003).

The functions associated with the institutional norms are necessarily overlapping and interdependent in the sense that the functioning of a given institution has consequences for the functioning of the others. For example, the performance of the economy is dependent on the quality of the “human capital” cultivated in the schools. The capacity of the schools to develop human capital is circumscribed by the individual backgrounds that students bring with them from their families. The effective functioning of all three of these institutions—the economy, education, and the family—presupposes an environment with at least a modicum of social order, for which the polity has formal responsibility. Finally, the effectiveness of the polity in promoting the collective good (at least as perceived by those who wield political power) depends on the nature and quality of

⁴ It is important to distinguish this usage of the term “moral” from a conceptualization that invokes a transcendental standard of morality. A concrete society might secure compliance with institutional

norms by virtue of the moral authority that they exercise over societal members, but the prescribed behaviors might be judged to be immoral according to some “ultimate” standard of morality.

⁵ See Messner (2003a) for an extended discussion of points of overlap and divergence between Merton’s theory of social structure and anomie and IAT.

economic resources and human capabilities supplied by the other institutions.

The interdependence of major social institutions implies that, for the society to “work” at all, there must be some coordination among institutions, just as there must be some coordination among the ultimate ends of individual actors. The requirements for the effective functioning of any given institution, however, may conflict with the requirements of another. This potential for conflict is manifested in two important ways. One source of conflict involves competing demands associated with role performance. Given the fact that time is a finite resource, performing a given institutional role (e.g., working overtime) may preclude performing another role (e.g., taking one’s daughter to soccer practice). In addition, the kinds of orientations towards action that are appropriate differ in certain important respects depending on the institutional domain.

An especially stark contrast can be seen between the orientations for interactions embodied in the institutions of a market economy and the family. Family relationships are expected to be regulated by the norms of particularism, affective engagement, and diffuseness, whereas transactions in the marketplace are governed by universalism, affective neutrality, and specificity (Parsons 1951). Concrete actors are thus required to shift their basic orientations towards interactions as they negotiate the different institutional demands that they face.

Any given society will therefore be characterized by a distinctive arrangement of social institutions that reflects a balancing of the sometimes competing claims and requisites of the different institutions, yielding a distinctive “institutional balance of power.”⁶ Indeed, a very useful way of classifying whole societies is according to the prevailing form of institutional balance. In some societies, such as the former Soviet Union, the political system dominates the institutional order. In others, the so-called primordial insti-

tutions (family, clan, ethnic group) are dominant. The core claim of IAT is that the type of institutional configuration that is conducive to high levels of crime in the advanced societies is one in which the rules of the economy are awarded highest priority in the system of institutions. In such a society, the economy tends to dominate the institutional balance of power, thereby creating institutional imbalance.

Economic dominance is manifested in three principal ways. One is devaluation. Non-economic institutional roles tend to be devalued relative to economic roles. Non-economic roles carry less prestige than economic roles and their occupants receive fewer rewards for effective role performance. A second manifestation of economic dominance is accommodation. Individuals feel pressures to sacrifice other roles to economic roles when conflicts emerge, as when a family abandons collective meals because they conflict with members’ work schedules. The third manifestation of economic dominance is penetration. The logic of the marketplace intrudes into other realms of social life. Paying students for their educational accomplishments is a particularly stark example (Messner and Rosenfeld 2007, 82–83). On a larger scale, the increasing commercialization of sports and the arts and the “privatization” of public institutions and functions provide countless examples of such intrusions.

Economic dominance in the institutional balance of power can be linked specifically with criminal behavior via both internalized normative controls and informal social controls. With respect to the former, economic norms in market capitalist economies are predicated on a calculative orientation towards action. Economic thinking, economizing, intrinsically involves cost/benefit assessments to determine how to allocate scarce resources among alternative uses. In their performance of economic roles, actors are thus encouraged to apply “efficiency” norms in the selection of the means to achieve their ends, and to accumulate as much as possible the prime medium of exchange used in economic transactions: money.

⁶ We use the term “power” in the phrase “institutional balance of power” in the sense of functional primacy and not in the sense of political struggles. When an institution domi-

nates the institutional balance of power, the claims and requisites of that institution take precedence over those of other institutions.

IAT predicts that under conditions of economic dominance in the institutional balance of power, the orientation toward action associated with the performance of economic roles “spills over” into social action more generally. Concrete actors are prone to use whatever means are technically expedient to realize their ends, regardless of the normative status of these means. To return to the language introduced above, institutional norms have little moral authority when the economy dominates the institutional balance of power. The means of social action have been literally de-moralized, resulting in anomie.⁷ Under conditions of extreme anomie, the internalized restraints against crime are expected to be quite weak. Compliance with institutional norms, including legal norms, is thus dependent on the “secondary type of control,” i.e., the “calculation of advantage.”

Yet economic dominance tends to undermine this alternative type of control as well. Economic dominance implies that non-economic institutions are enfeebled. The roles of these institutions become less attractive; people fail to develop strong attachments to them; and the enactment of these roles is subservient to the enactment of economic roles. The incentives and disincentives associated with non-economic role performance are thus rendered less salient to actors as they orient their behaviors away from such roles. Accordingly, the two principal motives for compliance with institutional norms explicated above—their moral authority and the potency of the incentive/disincentive structures associated with them—are likely to be weak under conditions of economic dominance. It follows that behaviors contrary to the norms, including behaviors that violate norms that

have been codified in criminal law, will be relatively frequent and commonplace.

3.2. The Value Foundations of Economic Dominance in the Institutional Balance of Power and the Explanation of Criminal Violence

IAT thus describes how a specific configuration of social institutions and the accompanying normative order it represents create a social environment that is more or less conducive to criminal behavior by virtue of the operation of internalized moral controls and external social controls. The original formulation of the theory does not fully explain, however, the interconnections between institutional structure and fundamental cultural values. If institutions reflect values that are in some meaningful sense shared and “basic” to a society, as argued persuasively by Parsons, then any institutional structure that endures for an appreciable amount of time, even one that exhibits “imbalance” among the constituent institutions, must be grounded in a distinctive set of values.⁸

Moreover, the applicability of IAT specifically to violent criminal offending—the focus of the present inquiry—requires explicit consideration. The erosion of the moral authority of institutional norms and the weakening of external social controls are in principle relevant to the explanation of all forms of criminal conduct and of deviant behavior more generally. Research by Karstedt and Farrell (2006) indicates that insights from IAT can in fact be applied to explain the so-called “crimes of everyday life,” i.e., morally dubious acts, not all of which are technically illegal. In addition, a paradox emerges when the applicability of

⁷ The “demoralization” of the means of action as a result of the penetration of the logic of a market economy is not the only possible source of anomie. Anomie may reflect features of the normative order itself, such as internal inconsistencies among norms or lack of clarity in the norms. See Thome (2003; 2007) for an extended discussion of the different subtypes of anomie in Durkheim’s work and, in particular, the distinction between “developmental” or “process induced” anomie and “chronic” or “structural” anomie. The former is a temporary condition that emerges during periods of rapid change; the latter refers to a stable feature of the institutional order. IAT focuses primarily on “chronic” or “structural” anomie, although it has potential applicability for other forms of anomie as well.

⁸ Although we adopt Parsons’ general approach to the conceptualization of social institutions, we depart here from the spirit of much Parsonian sociology in one important respect. Parsons emphasizes the smooth functioning of social systems, and he thus might have conceived of “economic dominance” as a temporary form of structural malintegration, one that would be rectified through equilibrating mechanisms. We leave open the possibility that a social system characterized by economic dominance in the institutional balance of power is viable and durable, although we expect that such a social system will exhibit high rates of criminal violence as part of its “normal” functioning (see Rosenfeld and Messner forthcoming).

IAT to violence is considered in historical context. Historical studies reveal that levels of interpersonal violence, and in particular homicide, have declined substantially over the course of the past several centuries, at least in Europe, where rich historical data are available (Eisner 2003a, 2003b). How can the institutional dynamics depicted in IAT, which pertain to highly developed market societies, be reconciled with these documented trends in violence? A comprehensive account of the impact of social organization on levels of criminal violence requires that the cultural underpinnings of economic dominance in the institutional balance of power be explicated clearly and fully, and that the hypothesized institutional and cultural processes be situated within the larger historical context.

We can advance such an account by drawing upon Durkheim's insights about the morality of traditional versus advanced, highly differentiated societies.⁹ In his classic formulation of the processes of societal evolution, Durkheim (1964a [1893]) explains the transition from primitive or segmentally divided to modern societies with reference to a fundamental shift in forms of social solidarity—from the “mechanical” type to the “organic” type. Durkheim also identifies a concomitant erosion of “collectivism” and rise in “individualism.” This latter distinction is directly relevant to understanding patterns in violence. Specifically, Durkheim suggests that “with the progress of civilization homicide decreases” (1958 [1950], 113). The reason for this trend lies in the demystification of the collectivity and its devaluation relative to the “worshipping” of the individual. Durkheim construes “collectivism” as an integrative pattern in which the group—the family, the clan, a professionally defined group, a religious or ethnic community—is valued much more than the individual and his or her well-being.

Premised on this foundational value pattern, Durkheim identifies two major, closely intertwined organizing prin-

ciples which, in his view, shaped the institutional order of pre-modern European societies and made such an order prone to interpersonal violence: honor and a rigidly defined social hierarchy, within a society divided into estates. The importance of honor and its counterpart, “defamation,” in stimulating violent conflict has been widely recognized in a variety of contexts and need not be elaborated here (see, for example, Nisbett and Cohen 1996; Spierenburg 1998). With respect to hierarchy (Roth 2001, 47), we note in particular the following aspect. If the group counts more than the individual, particular persons are typically regarded as closer to the gods than the masses; there are leaders and followers, masters and servants, insiders and outsiders. In other words, members of the various strata differ in the amount of honor, respect, and general human worth granted them. These differences are likely to be criminogenic on their own, as indicated in various historical studies (e.g., Ruggiero 1980; Lehti 2004, with reference to Ylikangas 2001) and also in experimental research (Zimbardo et al. 1974).¹⁰ The potential for hierarchy and processes of social marginalization to contribute to violence is likely to be relevant to the (post-) modern societies as well as to the traditional, collectivistic societies.

Durkheim argues that traditional collectivism had to break down in the course of an increasingly advanced division of labor and the transformation from a segmentally divided, rigidly stratified society to a functionally differentiated society. In the latter type of society, the individual is no longer tied into a closely knit mesh of norms, symbols, and rituals that define his or her own identity primarily in terms of belonging to a collectivity. The fusion of personal and collective identities dissolves. The individual's social standing and reputation are no longer defined by a group-specific code of honor that, for example, makes blood revenge obligatory.¹¹ Violence that injures, mutilates, or kills another person becomes increasingly repugnant, abominable.

⁹ The following discussion is based on Thome (2007). Advances in historical knowledge and sociological theory have corrected and modified many of Durkheim's ideas (Fenton 1984, Turner 1993). Nevertheless, some of his insights are still valid and quite helpful in explaining the long-term developments in violent crime.

¹⁰ Baumeister et al. (1996) review some of the psychological literature confirming the violent implications arising from claims of superiority. For the connection between sharpened economic competition and the “renaturalization” of inequality resulting in differential claims of moral worth, i.e. superiority, see Bauman (1990) and Young (1958).

¹¹ The code of honor is still relevant in certain situations involving group relationships, such as adolescent street life in inner city ghettos (Anderson 1999).

Although traditional collectivism erodes as societies evolve, Durkheim by no means posits a total disappearance of collective sentiments (Bellah 1973, xli). There is a “collective conscience” even in individualized societies, but the highest-ranking value is the individual “in general”; not just the individual “self” but also the individual “other.” This “moral” or “cooperative” individualism respects the individual as the carrier of universal rights and obligations. As a social praxis, moral individualism is based on mutual sympathy and respect for others—any other person. It seeks to increase social inclusion, and it postulates the right of self-actualization for all. It runs counter to “free-riding” practices, promotes adherence to the principles of reciprocity (solidarity based on fairness), and occasionally calls for (bearable) sacrifices to help those in need. Cooperative individualism thus implies a principled readiness to invest in collective goods (like having a democratic government or preserving the natural environment) even without calculable individual payoffs or losses.

Moving from culture and social praxis (forms of interaction) to the social structural and the political plane, we note that cooperative individualism seeks to secure justice and to balance personal freedom and equality, mainly by combining social welfare provisions and parliamentary democracy. Durkheim insists on the functional primacy of the state over the economy, because the latter is immanently amoral. The state serves as “the organ of moral discipline” (1958 [1950], 72), and at the same time it is the champion of individualism (1958 [1950], 69). Without the state, the individual could not have been set free from primordial bonds; without the state, there would be no power to protect the individual against the tyrannical claims of the group. Durkheim, on the basis of his reading of history, is led to the conclusion that “except for the abnormal cases . . . the

stronger the state, the more the individual is respected” (1958 [1950], 57).¹² On the other hand, Durkheim also stresses the necessity of counterbalancing the power of the state with strong secondary social groups—what political scientists and sociologists have later conceptualized as various forms of “corporatism” (e.g., Siaroff 1999; Hall and Gingerich 2004).

In Durkheim’s view, then, it was mainly the erosion of collectivism that brought about the long-term decline in levels of interpersonal violence.¹³ In his earlier, more optimistic, writings he also assumed that the emerging individualism would predominantly take on the cooperative form just described: the presumably “normal” type of modern society that would stabilize the low level of interpersonal violence. The new value system implies, among other things, a lower level of passion and stronger control of emotions. The reason why passions, in particular the impulse to retaliate and punish violently, are lower or more constrained in individualist cultures seems to be that the person who violates the norms (and is to be punished for that) is, so to speak, an incarnation of the very object which is now being worshipped, i.e., the individual in general (Durkheim 1978 [1895]).

Durkheim’s account of the large-scale pacification associated with the growth of individualism is similar in some respects to Elias’s views on the “civilizing” process (1982 [1939]), but with an important distinction. For Elias, the disciplinary forces of the advanced societies hold down individual impulses; for Durkheim, individuals are freed from the closely knit bonds that tied them to the collectivity. Durkheim also theorizes, however, that the restructured agents of social control and moral guidance, particularly the nuclear family, the school, professional organizations,

¹² Durkheim’s faith in the capacity of the state to serve as “the guardian, promoter and enforcer of civic morality” can certainly be challenged given subsequent historical developments, as noted by Varga (2006, 463). See also Wolfe (1989) for an extended discussion of how expansion in the authority of the state can threaten the vitality of civil society.

¹³ This thesis has been supported by a statistical analysis of crime data available for Germany at the end of the nineteenth century (Thome 2002). Karstedt (2006) also reports evidence consistent with Durkheim’s claim about the effect of the movement from collectivistic to individualistic values on levels of violence. In her analysis of cross-national variation in homicide rates in the latter decades of

the twentieth century, she finds that an indicator of individualism is negatively associated with levels of homicide. See also Karstedt (2001, 2004).

and most importantly, the authority of a democratically legitimized state, play a critical role in providing the moral underpinnings of the new social order.

Thus far we have recounted Durkheim's thesis of the "normal" evolution of cultural values. He also identifies an important "pathological" departure from cooperative individualism, which he refers to as "egoistic" or "excessive" individualism.¹⁴ The defining characteristics of this form of individualism are hedonistic self-fulfillment instead of social solidarity; ruthless pursuit of one's own interests while using others as a mere "means" in strategic interactions. In the tradition of the Frankfurt School of social thought, it is the triumph of "instrumentalism" or, in Habermas' terms (1984), the dominance of strategic interaction over communicative action seeking mutual understanding and recognition. Durkheim is skeptical about the long term viability of this type of cultural value system, explaining that such orientations are ultimately self-delusive: a meaningful life can be found only within solidary social relationships. Tocqueville had already warned that materialism and egoism triggered by too much competition would threaten the moral base for political democracy.¹⁵

We suggest that what Durkheim depicted as a pathological but possibly temporary cultural condition is in fact compatible with an ongoing institutional order. As noted above, the emergence of the new forms of social solidarity

predicated upon a moral individualism presupposes the effective operation of the restructured agents of social control and moral guidance—the family, the schools, the democratic state, and other entities associated with civil society. However, as described by IAT, economic dominance in the institutional balance of power implies that these sources of effective social control and moral guidance are rendered relatively impotent. The type of individualism that emerges along with the erosion of collectivism as societies become more highly differentiated is thus likely to give increasing weight to the "egoistic" form rather than the "moral" or "cooperative" form. Moreover, under these conditions, egoistic individualism at the level of cultural values is likely to go hand in hand with anomie at the level of normative regulation. The values of this type of individualism do not promote social integration; quite the contrary, they interfere with effective integration and are distinctly disintegrative (Thome 2007). In short, we propose that egoistic or disintegrative individualism provides the cultural foundation for economic dominance in the institutional balance of power and widespread anomie.¹⁶

A heuristic model of our elaborated formulation of IAT is presented in Table 1. This model highlights the core features of an institutional order that is theorized to be conducive to high levels of violent crime in advanced industrial/post-industrial societies.

¹⁴ At this point we somewhat expand Durkheim's concept of egoistic individualism so as to bridge the conceptual gap implied in his original distinction between egoistic and anomic suicide. One might refer to this modified concept under the title of "disintegrative individualism" (Thome 2007). Durkheim himself, in several passages of *Suicide*, constructed tenuous bridges of this kind. See also footnote 16 below.

¹⁵ On the causal connections between a culture of competition, social and economic inequality, and violence see also Hagan et al. (1998), Jacobs and Carmichael (2002), Messner (2003b), and Pescosolido and Rubin (2000). An interesting approach to studying the anomic consequences of highly

marketized societies is also offered by Burkatzki (2007); see also the Burkatzki paper in this issue. Studying data from European surveys conducted in 1969 and repeated in 1990, David Halpern (2001) finds evidence for increasing importance attached to "self-interest." He also finds a rather strong positive relationship between aggregated self-interest and national victimization rates, particularly when combined with relatively high level of social inequality. It fits into this picture that of all the various types of criminal violence robbery rates exhibit the largest increase since the 1960s.

¹⁶ Durkheim himself, in his book on suicide, does not interpret egoistic individualism as a force that would promote violence; he views it only as an aggravating condition with respect to suicide. Thome (2004) has argued that Durkheim's reasoning is not convincing on this point. Dicristina (2004) notes that Durkheim concentrates on unpremeditated murder which he could more easily line up with his notion of "passions" presumably preeminent in collectivistic societies. Premeditated murder, instrumental killings, and other forms of intentional assault, however, should be clearly within the reach of egoistic individualism, particularly so if it is joined with anomie in the form of disintegrative individualism.

Table 1: Predicted rates of homicide under varying economic conditions.

Characterization of the institutional order		Predicted aggregate behavioral outcome	
Value foundations:	Type of structural integration:	Degree of regulatory integration:	High levels of criminal violence
Disintegrative (egoistic) individualism	Economic dominance in the institutional balance of power	Tenuous moral authority (anomie) and weak institutional control	

4. Integrating Levels of Analysis

IAT was originally advanced as a distinctively macro-level perspective on the social determinants of crime. The key concepts and processes that constitute the theory pertain to objective properties of large-scale social systems. It is important to recognize, however, that institutions can also be approached from the subjective view of concrete actors, as stressed by Parsons. The institutional dynamics depicted in the heuristic model in Table 1 are ultimately grounded in individual-level processes. Institutions emerge from human agency, and the level of violent crime in a society is ultimately comprised of the aggregated volume of discrete acts of criminal violence. From the vantage point of individual actors, violence might be appealing for a variety of reasons. It might serve the expressive purpose of inflicting harm on others in response to grievances or humiliations, or it might be used for the instrumental purpose of securing compliance from others against their will (Tedeschi and Felson 1994) or eliminating them to obtain some type of external “good.” Accordingly, in the absence of salient normative considerations and moral obligations, the likelihood that violence enters into social interaction increases.

IAT implies that the probability of selecting violent means that are proscribed by the criminal law will be related to actors’ orientations towards the institutional norms, their valuation of economic roles and goals relative to non-economic roles and goals, and their “performance repertoires” of economic and non-economic roles and the resources available to them. With respect to orientations towards norms, the distinctive prediction to be derived from IAT is

that the likelihood of criminal violence will be high when actors are not particularly sensitive to the moral status of the means of action in general. Such actors will lack strong internal controls against the use of whatever means are expedient in pursuit of their goals, including violent means.

We emphasize the reference to the means of action in general in the formulation of our hypothesis. The prediction that the strength of allegiance to a specific legal norm is related to the probability of violating that norm is certainly plausible but is not particularly original. This prediction could be readily translated into the “belief” element of conventional social bonding theory (Hirschi 1969). Moreover, the connection between beliefs and violent crime becomes tautological if the committing of the crime is regarded as definitive evidence of the lack of allegiance to the corresponding criminal law. Persons commit acts of criminal violence when they have little respect for the laws prohibiting such violence; the lack of such respect is manifested in the violation of the criminal laws. The novel and testable prediction to be derived from IAT, in contrast, pertains to the “spillover” effect hypothesized as characteristic of a situation of high anomie. The theory implies that the tendency for actors to adopt a calculative orientation to the selection of means in non-economic but legal realms of life will predict the degree of involvement in criminal violence.

With respect to the relative valuation of institutional roles, the prediction from IAT is that actors who perceive economic roles to be more attractive and more highly valued than non-economic roles are expected to be at comparatively high risk of criminal behavior, including violent crime. Such individuals will not be strongly bonded to conventional society through the diverse array of institutional attachments and will thus be exposed to weak external controls (Hirschi 1969). These perceptions of the relative attractiveness and valuation of institutional roles are likely to be empirically related to, but analytically distinct from, behavioral repertoires. The performances of various types of institutional roles depend not only on subjective evaluations but also the opportunity structures and role demands confronting actors. Accordingly, an additional prediction follows from the vantage point of IAT: actors who tend to privilege economic roles over non-economic roles in their

actual role performance, especially under conditions of role conflict, will be more likely to engage in violent crime.

The hypotheses about individual action considered thus far pertain to the balancing and prioritizing of the respective roles considered across distinct institutional domains. We also suggest that the macro-level condition of economic dominance in the institutional balance of power is reflected in the nature of the performance of roles within the institutional complex of the economy itself. Here it is important to recall Parsons' distinction between concrete forms of behavior and the institutional element contained in such behaviors. The performance of economic roles by definition contains a paramount economic element. However, concrete interactions, such as transactions in the marketplace, can and usually do incorporate to varying degrees social elements in addition to the purely economic element.

Fred Block (1990) has proposed the very useful concept of "marketness" to capture variation in the social content of economic activity. Marketness refers to a continuum that essentially reflects the extent to which market transactions are "embedded" in more general social relationships.¹⁷ At one end of the continuum, that of high "marketness," actors are primarily responsive to price signals, and their motivations for the transactions are purely instrumental (1990, 51–54). Actors engage in exchanges that are most rational in terms of an economizing cost/benefit assessment, and the character of these exchanges reflects the orientations of *homo economicus*. The participants are regarded universally; there is little affect involved; and the activity is highly specific to the task at hand. At the other end of the continuum, market transactions are not exclusively economic in character. Considerations other than price come into play, and instrumental motives are blended with expressive motives.

To illustrate, consider the customer of a convenience store who develops an acquaintanceship with the owner and

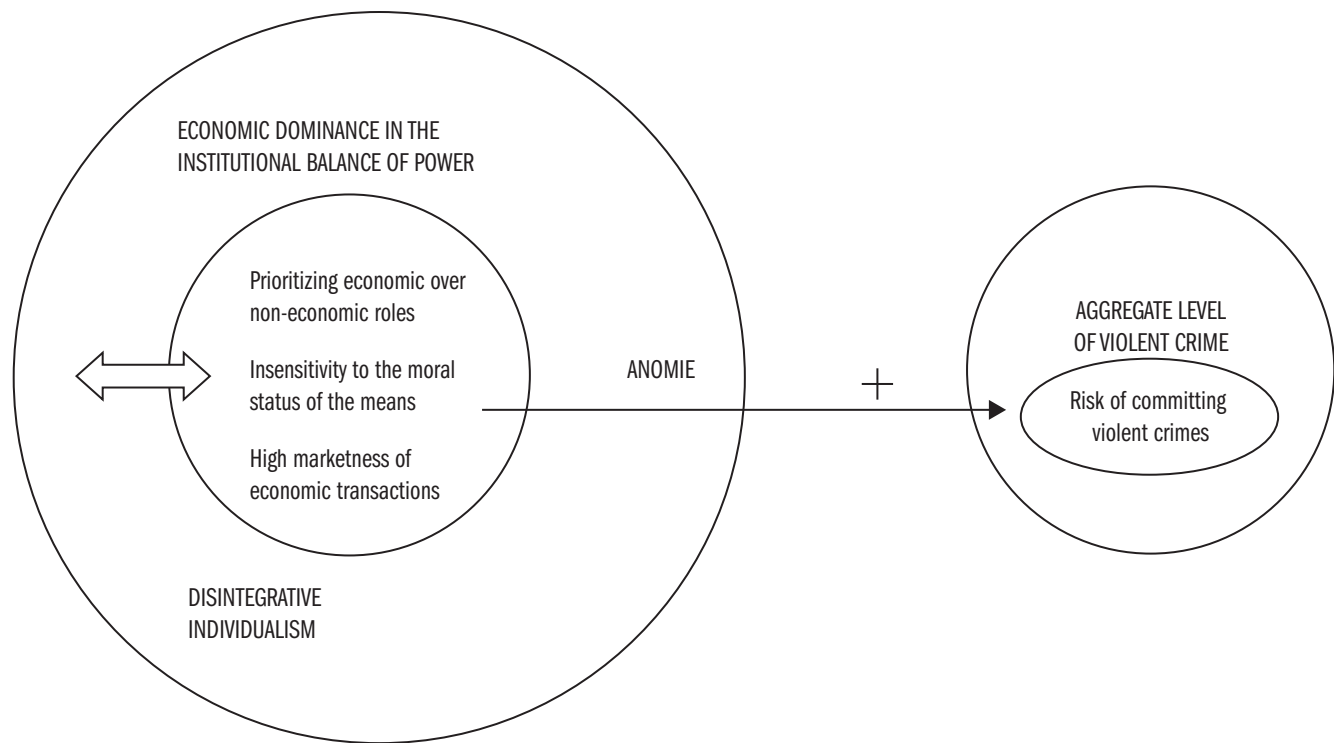
patronizes that particular establishment despite higher costs of products because the interactions are enjoyable. The "marketness" of the ensuing transactions—the purchase of commodities on the market—has been lessened, although economic institutional roles are nevertheless being enacted. In principle, the nature of involvement of a given member of a society in economic transactions could be characterized with respect to the overall degree of their "marketness" (Block 1990, 56). The associated prediction to be derived from IAT is that persons who exhibit a high degree of "marketness" in their economic transactions will tend to exhibit anomic orientations towards social norms and be at relatively high risk of involvement in criminal violence.

These arguments about the underpinnings of institutional processes in the behaviors of concrete actors suggest an individual-level counterpart to the system-level arguments of IAT elaborated above. The two sets of arguments can be merged into an integrated multi-level model, which is presented schematically in Figure 1. The inner circles represent the realm of individual action, while the outer circles depict the associated properties of the social system. At the level of individual action, our arguments imply that the risks of committing violent crimes will be high for actors: (1) who prioritize economic roles over non-economic roles (perceptually and behaviorally); (2) who are insensitive to the moral status of the means of action; and (3) whose enactment of economic roles is high on the "marketness" continuum. The specific intervening mechanisms are individual-level analogues to the postulated macro-level processes and are the well established proximate causes of crime as enumerated in much conventional criminological theory. Specifically, individuals with the designated orientations to institutional roles and goals, and the designated behavioral repertoires, are expected to have weak internal (moral) controls and weak external institutional controls.

¹⁷ Block's arguments are informed by the classic work of Karl Polanyi (1957 [1944], 1968 [1947]) on the "disembedding" of economic activity from social relationships as part of the emergence of market capitalist societies. For a discus-

sion of the affinities between Polanyi's ideas and IAT, see Messner and Rosenfeld (2000).

Figure 1: Multi-level model of institutional-anomie theory



Individual action, of course, is nested within a larger institutional environment. The type of institutional order that is hypothesized to generate the criminogenic individual-level properties in the model is one in which the economy dominates the institutional balance of power, anomie is pervasive, and fundamental cultural values emphasize a disintegrative form of individualism. The institutional environment and action in the form of the enactment of institutional roles and expressions of institutional orientations are themselves mutually constitutive, as reflected in the wide two-headed arrow. Institutions are created collectively by concrete actors, but these creations are in important respects external to any single actor. Finally, the level of violent crime in any society is in the final analysis the simple aggregation of discrete acts of criminal violence.

5. Empirical Applications of IAT at the Macro- and Individual Levels of Analysis

An accumulating body of research offers some support for key claims of IAT. The most common empirical

applications of the theory involve efforts to assess the impact of indicators of institutional dynamics on crime at the macro-level. For example, several studies have operationalized “economic dominance” with reference to indicators of social welfare policies and considered how these indicators act in concert with measures of the vitality of non-economic institutions such as family, polity, and school to affect levels of crime. The general conclusion to be drawn from these studies is that the expansiveness and generosity of the welfare state seem to be associated with reduced levels of crime, especially lethal criminal violence, either directly or by mitigating the effects of other criminogenic conditions, such as economic inequality or economic insecurity (Antonaccio and Tittle 2007; Messner and Rosenfeld 1997, 2006; Pratt and Cullen 2005; Savolainen 2000). However, the evidence is mixed, and given the inconsistencies across studies, further efforts along these lines are clearly warranted to generate greater confidence in the utility of IAT as a macro-level sociological explanation of crime.

Less attention has been devoted to the cultural dynamics implied by IAT than to the institutional dynamics in the macro-level research. This is not entirely surprising given that cultural phenomena tend not to be recorded and published in standard administrative data sources. Efforts to circumvent these limitations by using the World Values Survey (WVS) to assess claims in IAT have not yielded much support for the theory, although the interpretation of the findings is open to question (Cao 2004; Jensen 2002; Messner and Rosenfeld 2006).

More encouraging results concerning the impact of cultural factors have been reported by Baumer and Gustafson (2007). In a highly innovative analysis, these authors assess key propositions from both IAT and Merton's classic anomie theory (1938) using data on individual value commitments taken from the General Social Survey (GSS) in the United States aggregated to counties and county clusters. By aggregating individual survey responses to the area level, they are able to characterize populations according to theoretically strategic cultural constructs such as the strength of commitment to monetary success goals and the degree of respect for the legitimate means of attaining monetary success. They also include several measures of non-economic institutional strength (e.g., time spent with family, marriage rates, attitudes toward divorce, school expenditures, voter participation, welfare assistance) and examine both main effects and theoretically derived interaction effects. As with most of the research in this field, their analyses yield a complex picture, with some hypotheses receiving support (e.g., a criminogenic effect of a strong commitment to monetary success and a weak commitment to the legitimate means for pursuing success) and others not receiving support (e.g., higher level interactions between cultural orientations and indicators of the vitality of non-economic institutions). Nevertheless, Baumer and Gustafson's research illustrates quite nicely the potential for combining survey-based data with records from administrative sources to assess propo-

sitions about both cultural and institutional dynamics derived from IAT.

Efforts to apply IAT at the individual level are quite rare. One notable exception is a study of a minor form of deviance—student cheating—by Muftic (2006). Muftic explicitly sets out to assess the “robustness” of IAT by operationalizing key cultural and institutional variables at the individual level. Her research is based on survey data for a sample of 114 U.S. and 48 foreign-born undergraduates. Muftic creates scales to measure cultural values associated with the American Dream such as individualism, universalism, achievement orientation, and “monetary fetishism.” She also constructs indicators of commitment to the family, the educational system, the economy, and the polity.

The results of her analyses provide partial support for hypotheses derived from IAT. “[S]tudents with higher adherence to the cultural values of universalism and the fetishism of money had a higher likelihood of cheating” (2006, 648).¹⁸ In addition, the indicators of commitment to the family and the polity were negatively associated with the probability of cheating, as expected. Hypotheses about interactions between cultural and institutional variables, however, were not supported. The most powerful predictor of self-reported cheating by far was place of birth. The U.S. students were much more likely to report cheating than the foreign-born students.

The most ambitious and sophisticated attempt to apply insights derived from IAT at the individual level is the research by Karstedt and Farrell (2006). They focus on relatively common “morally dubious” acts, which they characterize as the “crimes of everyday life” (2006, 1011). These include behaviors such as avoiding taxes, not paying fees, and claiming benefits, subsidies, and refunds one is not entitled to. Karstedt and Farrell develop an elaborate, integrated analytic framework that combines E. P. Thompson's

¹⁸ As explicated above, “universalism” also characterizes moral individualism. In our view, it should therefore not be treated as an isolated variable but rather as an element in a broader interactive constellation of values and cognitive orientations.

concept of the “moral economy” with claims from IAT. On the basis of this framework, they theorize that a key determinant of the level of involvement in the crimes of everyday life is the “syndrome of market anomie.” This syndrome is conceptualized as a constellation of normative orientations comprised of three dimensions: a lack of trust of others in the marketplace, fears of becoming a victim of disreputable practices of others, and legal cynicism.

Karstedt and Farrell test their hypotheses with survey data collected from random samples of households in England and Wales and the former East and West Germany. They estimate structural equation models to assess the impact of the syndrome of anomie, treated as a multidimensional latent construct, on measures of intentions to engage in the crimes of everyday life. Their results in all three regions are consistent with theoretical expectations. The syndrome of anomie is positively associated with intentions to offend, and this syndrome mediates the effects of other relevant predictors of offending.

6. Directions for Future Research

The research applying IAT has thus been encouraging, but the evidence is obviously quite limited. In particular, applications of the theory to understand individual-level behavior, such as those by Muftic and by Karstedt and Farrell, are rare. We accordingly encourage further efforts along these lines.

We can also propose some new lines of inquiry at the individual level that are suggested by our explication of multilevel linkages above. The prior applications of IAT at the individual level have focused on minor forms of offending—student cheating and morally dubious but common misbehaviors in the marketplace. Our theoretical arguments, however, imply that insensitivity to the moral status of the means is likely to be a generalized phenomenon. It is likely to extend beyond the realm of norms governing instrumental behaviors and culturally prescribed success goals. We therefore predict that indicators of anomie at the individual level, such as Karstedt and Farrell’s measures of the syndrome of market anomie, should be capable of explaining involvement in serious forms of non-normative behavior, including (but not limited to) criminal violence.

We also note that prior individual-level research on the institutional determinants of criminal involvement has focused primarily on perceptual and attitudinal measures (see, for example, Muftic 2006, 642). These are intended to capture survey respondents’ subjective evaluations of the worth and importance of non-economic institutional roles. While such measures are useful and quite relevant to IAT, it would also be instructive to develop further and incorporate into statistical models indicators of “performance repertoires.” Such indicators could be based on accounts of the actual allocation of time devoted to the enactment of roles in the respective institutional domains. In addition, reports of how role conflicts have been resolved in practice would shed light on the extent to which, at the level of individual actors, the economy tends to dominate the institutional balance of power.

It would be quite interesting as well to pursue the line of inquiry suggested by Block (1990) and to attempt to operationalize the “marketness” of economic transactions. Our elaboration of multilevel linkages in IAT stipulates that economic dominance pertains not only to the balancing of roles across institutional domains but also to the manner in which economic roles themselves are enacted. Individual actors can embed their transactions in the marketplace with greater or lesser social content. In principle, it should be possible to measure the extent to which the economic activity of individuals is in practice more or less socially embedded. Our explication of IAT implies that the marketness of transactions should be positively related to anomie, and through anomie, positively related to criminal involvement, including involvement in violent crime.

In carrying out individual- and multi-level research on IAT it will be necessary to include indicators from other theoretical perspectives, some of which are theoretical “close cousins,” such as Agnew’s general strain theory (1992, 2006), and others seemingly at odds with IAT, such as Gottfredson and Hirschi’s general theory of crime (1990). We do not view insensitivity to the moral status of the means of social action, the marketness of social interactions, and the other individual-level attributes and processes we have described as the sole source of individual criminality or

necessarily as competing alternatives to indicators derived from other perspectives. They may also interact with indicators from other perspectives such that their effect on criminal behavior depends on the distribution of other factors, for example, suitable criminal opportunities and targets (Cohen and Felson 1979).

The individual-level dimension of IAT, however, does differ from other individual- or micro-level theories in two important and related respects: First, from the perspective of IAT, the individual attributes and repertoires that lead toward or away from criminal behavior arise in and, in turn, reinforce the defining cultural and structural features of whole societies. As such, they should be understood and investigated in multilevel context. Second, the characteristics that distinguish criminals from others in IAT should not be interpreted as signs or symptoms of abnormality, pathology, or other individual deficiencies or defects. On the contrary, they are the normal, expected outcomes of socialization in contexts in which anomie is rampant, non-economic institutions are weak, and disintegrative individualism prevails.

We acknowledge that further theoretical questions remain unanswered in current formulations of IAT. Perhaps one of the most basic questions pertains to the origins of economic dominance or other forms of imbalance in the institutional balance of power. One approach to this issue is to direct attention to the decreasing power of the nation-state and other political institutions to regulate economic processes or to compensate for certain dysfunctional consequences they produce in other spheres of social life.¹⁹ These pro-

cesses have often been summarized under the heading of “globalization”, i.e., the worldwide expansion of markets which has been proceeding during the last three decades at a much greater pace than the internationalization of political decision making (with the development of globally effective democratic control structures lagging even further behind) (Messner and Rosenfeld 2000). Major dimensions and consequences of these processes are: the increase of inequality in income and economic wealth in most societies worldwide (since the late 1970s); increasing poverty rates and social marginalization of growing segments of the population in many of the economically advanced nations; the rearrangement of social welfare regulations moving the social-democratic and the conservative type towards the “liberal” type, with less generous support and an emphasis on rigorous means testing (Esping-Anderson 1990); the increase of antagonistic forms of competition between states (indicated by falling tax rates on capital and business profits) and within states (indicated by increasing rates of insolvencies among businesses and private households as well as an expansion of advertising and marketing strategies); a concomitant decrease in the level of corporatist structures and employment protection; and a decreasing level of trust in government, political parties and parliament. All these developments are likely to be potentially criminogenic (Thome and Birkel 2007).²⁰

A final issue that should be addressed by any criminological theory with claims to comprehensiveness is the problem of punishment. Recent scholarship on imprisonment and the “mass incarceration” program in the United States and, to a

¹⁹ Of course, there is a wide spectrum of ideological positions regarding the desirable degree of the regulatory power of the state. But independent of one’s personal ideological position there are clear indications that during the last three decades the state has generally suffered from a loss of (democratic) political control over the economy. This is partly due to technological advancements (particularly in the means of communication) but also by political decision making like the dismantling of the Bretton Woods agreement and the liberalization of the financial markets (pioneered and pushed through mainly by the United States and Great Britain). For an analysis of these developments from a neo-Marxist perspective, see Harvey (2005).

²⁰ Modern versions of systems theory take a completely different approach to the questions that we are addressing. The answers offered (for example, in the work of Niklas Luhmann [1990, 1998]) rest on the assumption that there is an evolutionary process by which social systems become increasingly functionally (rather than segmentally) differentiated thereby forming sub-systems which tend to reach beyond national borders. Though “structurally coupled” they operate autonomously on the basis of “symbolically generalized media of communication” (or “exchange”), each subsystem defined by the use of a dominant medium which it specifically, and in contrast to other subsystems, applies. These are, for example, money in the economic subsystem, power

in the political realm, or proven truth in the realm of science. In each subsystem actors seek to maximize their own share of the dominant currency in order to secure or widen their range of future options. Morality “falls behind” in societal evolution because it is not supported by or rooted in a specific social subsystem (Luhmann 1990; 1998, 1036–45); it even tends to disturb smooth operations within these subsystems. Such a system-theoretic framework shares thematic concerns with core claims of IAT about institutional imbalances, and it would be instructive to derive and test formally complementary and competing hypotheses from the respective approaches.

lesser degree, England directs attention to the institutional underpinnings of the punishment process in advanced societies, but does not integrate theories of punishment with theories of crime (Garland 1990; Garland 2001; Sutton 2004). The heavy reliance on formal social control, and specifically imprisonment, as a response to crime is explicable from the perspective of IAT, particularly in its elaborated form presented in this paper. Societies in which “soft” behavioural controls have been vitiated by the institutional dominance of the economy can be expected to rely on imprisonment as a means of final resort to control high levels of violent crime. We can also expect such societies to exhibit an anomic insensitivity to the means by which the collective goal of crime control is attained and, therefore, to pursue punishment policies such as mass incarceration without scruples about the economic, social, and moral costs of escalating rates of imprisonment. At the same time, crime control through mass incarceration is incompatible with a strong cultural emphasis on the moral worth of the individual. In short, the resort to formal social control generally and the adoption of a policy of mass incarceration in particular are consistent with some of the core claims of IAT. One of the most promising aspects of the theory is the possibility of integrating explanations of crime and punishment within a single conceptual framework.

To sum up, IAT remains a work in progress. It emphasizes the importance of the larger institutional and cultural context for understanding crime and violence, and in that sense it seeks to stimulate a thoroughly “sociological” criminology. We argue that it is applicable at multiple levels of analysis, ranging from that of individual action to the dynamics of social systems. However, many core empirical claims have yet to be verified, and key mechanisms associated with the development of forms of social organization that are likely to be more or less criminogenic have yet to be adequately theorized. Nevertheless, we are hopeful that even in its evolving form, IAT will continue to generate fruitful puzzles for criminological theorizing and research.

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Want Amid Plenty: Developing and Testing a Cross-National Measure of Anomie

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Want Amid Plenty: Developing and Testing a Cross-National Measure of Anomie

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One of the biggest challenges facing researchers trying to empirically test structural or institutional anomie theories is the operationalization of the key concept of anomie. This challenge is heightened by the data constraints involved in cross-national research. As a result, researchers have been forced to rely on surrogate or proxy measures of anomie and indirect tests of the theories. The purpose of this study is to examine an innovative and more theoretically sound measure of anomie and to test its ability to make cross-national predictions of serious crime. Our results are supportive of the efficacy of this construct to explain cross-national variations in crime rates. Nations with the highest rates of structural anomie also have the highest predicted rates of homicide.

In 1994, Messner and Rosenfeld introduced the theory of institutional anomie (IAT). This theory expanded Merton's original theory on social structure and anomie (1938). Merton developed his theory to explain disproportionate crime rates in the United States. He examined the impact of cultural goals, the proscribed means of achieving those goals and the incongruity between these two things in the United States. Crime rates were predicted to be highest in those societies in which the culture emphasized monetary attainment to the detriment of the legitimate means for attaining it. Messner and Rosenfeld expanded on this notion by emphasizing the interrelationships among the various social institutions in society. They posited that an overemphasis on economic goals, coupled with a devaluation of society's non-economic institutions would result in high crime rates. Since its initial introduction, numerous researchers have attempted to test various aspects of this theory (Chamlin and Cochran 1995; Messner and Rosenfeld 1997; Hannon and DeFronzo 1998; Piquero and Piquero 1998; Savolainen 2000; Batton and Jensen 2002; Stucky 2003; Maume and Lee 2003; Schoepfer and Piquero 2006). Because of difficulties operationalizing the key concepts of the theory as well as numerous data limitations, these empirical examinations have only indirectly tested the theory. One of the important

findings to emerge from these tests is that the key tenets of this theory are sensitive to the operationalizations utilized. The current study advances this area of inquiry in a number of important ways. Firstly, this study utilizes cross-national data to examine violent offenses. More importantly, this study offers a unique and more theoretically specified operationalization of the key tenet of institutional anomie theory (IAT), while controlling for the strength of important non-economic institutions.

1. Institutional Anomie

IAT suggests that the high crime rates present in the United States are the result of an overemphasis on material and monetary attainment, the American Dream. The American Dream embodies the fundamental values of individualism, universalism, achievement and materialism (Messner and Rosenfeld 2006, 129). Messner and Rosenfeld suggest that the emphasis on the American Dream and the idea that this goal of economic achievement is possible by everyone in a system is underscored by open, individual competition.

Further, Messner and Rosenfeld (1994) examined the influence of various social institutions in promoting crime.

As they point out, social institutions help individuals to achieve these goals by socializing individuals to society's norms, helping them organize resources, and helping them cope. They focus on four such institutions: the economy, the family, the polity, and education.

The main tenet of their arguments is that crime is prevalent in situations where the economy is emphasized to the detriment of these other social institutions. The economy is the social institutions primarily responsible for promoting the fundamental values of the American Dream. Further, they note that a capitalistic economy is important as it allows for "private ownership and control of property and free market mechanisms for the production and distribution of goods and services" (1994, 76). When the economy is accentuated and the alternate non-economic institutions weakened, a situation where economic values dominate is present. When this happens the non-economic institutions must make accommodations that help further the dominance of the economy. For example, family time is sacrificed for work time. Further, economic goals and values become important in the context of non-economic institutions. Eventually, these non-economic institutions start to operate in manners that reinforce these economic goals. It is this situation that Messner and Rosenfeld believe is most criminogenic. The cultural imbalance identified above helps to promote anomie which in turn promotes crime. Additionally, these conditions also render the social control functions of the non-economic institutions ineffective.

The basic principles of Messner and Rosenfeld's theory have been tested several times. As noted earlier, two of the greatest challenges to empirically testing this theory are the difficulty operationalizing its key concepts and the difficulties inherent in collecting the requisite cross-national data. As a result, most previous tests of this theory have utilized inappropriate units of analysis (i.e., anything less than cross-national) and/or have been partial or indirect. Clearly the most important concept proposed both by Merton and by Messner and Rosenfeld is the idea of anomie. Since it is not practical to measure anomie directly at the aggregate level, it is necessary to identify situations where anomic pressures would be expected to be present. Therefore, researchers rely

on measures such as economic strength and relative and absolute deprivation.

Chamlin and Cochran (1995) provided one of the first tests of the theory. They examined poverty to measure the impact of economic conditions and determine whether the effects of these conditions on rates of crime varied by the strength of non-economic institutions. They found that the influence of poverty on property crimes was dependent on the strength of other non-economic institutions such as family, polity, and religion.

Messner and Rosenfeld took a slightly different approach and examined the effects of decommodification of labor on cross-national homicide rates. Decommodification should operate to moderate the influence of the economy on homicide rates. They found support for this proposition among a sample of forty-five nations. Similarly Hannon and De Fronzo (1998) examined the influence of social welfare assistance in moderating the effects of economic deprivation on crime rates. They likewise found that higher levels of welfare assistance operated to moderate and reduce the influence of economic disadvantage on crime rates.

Savolainen (2002) examined economic inequality to predict cross-national homicide rates while controlling for the strength of both the economy and other social institutions. His findings provided support for the idea that economic inequality was a predictor of homicide in situations with weak welfare support.

Piquero and Piquero (1998) focused on exploring various operationalizations of the key concepts in the theory to predict both property and violent crime rates. They found that the influence of the strength of the economy on crime was influenced by the effect of various social institutions. More importantly, they found the analysis to be sensitive to various operationalizations of the key independent variables, suggesting that findings may not be uniform and are influenced by the measurements utilized.

All in all, various empirical tests of IAT have found support for several aspects of the theory. However, the majority of these examinations have approached the study of this

theory in similar fashions. First, the majority of these studies have utilized data from only the United States (Chamlin and Cochran 1995; Hannon and DeFronzo 1998; Piquero and Piquero 1998; Stuckey 2003; Schoepfer and Piquero 2006). While these tests have provided important insights into the theory, they have not allowed the theory to be tested as it was originally proposed. Messner and Rosenfeld, like Merton, point out that the theories were designed to explain high crime rates in the United States relative to other countries. Therefore, this proposition can only be fully tested by utilizing a cross-national sample.

In addition, one of the greatest challenges facing researchers who wish to empirically test Mertonian structural anomie theory or Messner and Rosenfeld's institutional anomie theory is the ability to directly measure anomie at the aggregate level. Previous researchers have been forced to rely on proxy or surrogate measures, typically relying on single indicators of economic strength (gross domestic product) or deprivation/economic inequality (Gini coefficient) (e.g., Messner 1982; Messner and Tardiff 1986; Chamlin and Cochran 1995; Piquero and Piquero 1998; Savolainen 2000; Messner, Raffalovich, and Schrock 2002; Maume and Lee 2003).

Messner and Rosenfeld conceptualized anomie as a multi-dimensional concept. They indicate that one would expect anomie to be present in societies that emphasize the American Dream while simultaneously blocking a portion of their populace from the legitimate, societally prescribed means for achieving those goals. Further, they define the American Dream as "a commitment to the goal of material success, to be pursued by everyone in society, under conditions of open, individual competition" (2007, 68). Meritocracy is expected to increase anomie specifically in situations where an egalitarian ideology does not differentiate between various strata with differential access to success (Passas 1997). Theoretically, one would also expect anomie to be highest in situations where non-economic institutions have been co-

opted through the penetration and accommodation of economic values and consequently have lost their effectiveness as control institutions. In fact, Merton originally hypothesized that it was the combination of cultural universalism, cultural imbalance, and a stratified social structure that leads to anomie. Messner and Rosenfeld (2007) reiterate that anomie is produced by cultural pressures to achieve material wealth coupled with a strong economy that reinforces this goal. Therefore, one would expect anomie to be present in situations of open competition, where monetary achievement and individual economic success are emphasized and portions of the population are impeded from achieving success. All three conditions should be simultaneously present to produce high levels of anomie. Previous research testing this theory has relied on either single indicators of anomie or when examining multiple indicators has examined only the direct effects of these measures.

The present study advances the current debate by utilizing a cross-national sample to test the relative effects of an alternative and more theoretically specified operationalization of anomie on serious violent offenses. If these indicators must all be present simultaneously, then the appropriate specification of this measure would be a multiplicative term measuring the effect of economic strength with an emphasis on open competition in a situation where segments of the population are simultaneously blocked from achieving success. We will examine the influence of this new measure on cross-national homicide rates while simultaneously controlling for the strength of non-economic institutions.

2. Data and Measures

As noted above, IAT attempts to explain macro-level crime rates. The data for this study were collected for forty-nine nations from a variety of sources including the International Criminal Police Organization (INTERPOL), the World Health Organization, the United Nations, the World Bank, and other international sources identified in Appendix A;

¹ The data for this study was utilized in a previous study and therefore the methods section is substantially similar in nature (see Bjerregaard and Cochran 2008). The forty-nine nations examined are: Albania, Austria, Azerbaijan, Bahamas, Bangladesh, Bul-

garia, Canada, Columbia, Costa Rica, Croatia, Czech Republic, Denmark, Dominican Republic, Estonia, Finland, France, Georgia, Germany, Greece, Hungary, Israel, Italy, Jamaica, Japan, South Korea, Kyrgyzstan, Latvia, Lithuania, Luxembourg, Maldives, Mol-

dova, Netherlands, New Zealand, Norway, Panama, Poland, Portugal, Romania, Singapore, Slovenia, South Africa, Spain, Sweden, Switzerland, Trinidad, Tunisia, Turkey, Ukraine, and United States.

the data for the independent variables were taken from 1997 where possible and 1996 if 1997 data were not available.¹ Appendix B shows the means, standard deviations, and ranges for the measures utilized in the analysis.

Crime rates. Messner and Rosenfeld (1994) propose that their theory also explains cross-national differences in the rate of serious crimes; therefore, cross-national homicide rates are utilized as our measure of crime. This measure offers the additional advantage of being considered the most reliable and accurate estimate of crime available for cross-national comparisons. Homicide rate data were derived from both the World Health Organization (1997–99) and the International Crime Statistics published by INTERPOL (1997). The primary source of data is the World Health Organization (WHO). If data were missing from this source, INTERPOL data were utilized. While WHO data are considered by some to be the most reliable estimates of international crime rates (Avison and Loring 1986; Savolainen 2000; Messner, Raffalovich, and Schrock 2002; cf. Krahn, Hartnagel, and Gartrell 1986; Nalla and Newman 1994; Chamlin and Cochran 2007), the WHO and INTERPOL measures correlate very highly for the sub-sample of nations for which complete data are available.

To control for yearly fluctuations, multi-year averages were computed. A logged transformation of this measure was utilized as it was highly positively skewed. Initial analyses also indicated potential problems with heteroscedasticity which were greatly reduced once the measures were logged.

Numerous concerns regarding the use of official statistics to measure cross-national crime have been raised (e.g., Newman 1999). One of the primary issues is the possibility of systematic bias in the reporting practices of various nations.² Kick and LaFree (1985, 42), however, conclude that offenses such as homicide, which has ancient origins, exhibit a fairly high degree of definitional consistency and

are more comparable. Likewise, Krohn and Wellford (1977) and Krohn (1978) also suggest that problems of systematic bias may not be particularly serious. This was also concluded by Bennett and Lynch (1990) who examined the reliability of four cross-national crime data sets, including Archer and Gartner's CCDF, INTERPOL, UN, and WHO data.³ They concluded that for analytical purposes all four data sets afforded substantively similar results (1990, 176). They also concluded that analytic studies were "more robust than descriptive studies with respect to error" and that such error did not necessarily affect the substantive findings unless correlated with the independent variables (1990, 157). They also suggest that aggregating these indicators helps to mitigate some of these issues.

Anomie. Messner and Rosenfeld (2001, 68) stress that the core values expressed in the American Dream are supported by the economy and that the most important characteristic of the American economy is its capitalistic nature which is defined by "both private ownership and control of property and free-market mechanisms for the production and distribution of goods and services." However, they also stress that a free-market economy, if unregulated by other non-economic social institutions, will adversely impact crime rates. When the economy is unchecked by non-economic social institutions, the principles of the free-market economy dominate and infiltrate the functions of these other institutions. The degree to which economic conditions influence non-economic institutions is associated with both the amount of control or political restraint the state exerts over the economy and the extent to which it attempts to mediate the effects of these economic conditions (Batton and Jensen 2002, 7). In fact, anomie should be greatest in situations where the American Dream is emphasized under conditions of open, individual competition (Messner and Rosenfeld 1994). These conditions should have more of an impact when state regulation and control are reduced. This suggests that the impact of the economy on crime at a cross-

² It should be noted that the same concerns have been raised concerning crime estimates across the United States (Wiersema, Loftin, and McDowall 2000).

³ In fact, Bennett and Lynch (1990, 176–77) suggest that the selection of a data set should be based on coverage or logistical considerations. In our data, the homicide rates reported by INTER-

POL and the WHO were found to correlate at .80 lending credence to the idea that they are substantially measuring the same phenomenon.

national level of analysis involves at least three elements: (1) the degree of economic freedom/regulation within a nation, (2) the strength of the economy to sustain opportunities for the accrual of wealth, and (3) the nature of economic conditions (i.e., the extent to which opportunities for wealth accrual are open for all members of society).

The prominence of a free-market economy, unrestrained and unregulated by social or political constraints is measured first by an index of economic freedom developed by the Heritage Foundation (O'Driscoll, Holmes, and O'Grady 2003). Economic freedom is defined as "the absence of government coercion or constraint on the production, distribution, or consumption of goods and services beyond the extent necessary for citizens to protect and maintain liberty itself" (Beach and O'Driscoll 2003, 2). Each country is rated by examining fifty economic variables classified into ten broad categories including: trade policy, fiscal burden of government, government intervention in the economy, monetary policy, capital flows and foreign investment, banking and finance, wages and prices, property rights, regulation, and black market activity (Beach and O'Driscoll 2003, 2). High scores on this variable are indicative of institutional policies that are most conducive to economic freedom.⁴

In a free market economy one would expect obstacles to economic success to have a direct impact on crime rates. In the present study, economic obstacles are operationalized by a measure of relative deprivation or economic inequality. Nearly every test of IAT has also employed a measure of economic inequality as an indicator of deprivation related to impediments to economic attainment: Chamlin and Cochran (1995) and Piquero and Piquero (1998) both used a measure of the percent of families living in poverty; Messner and Rosenfeld (1997), Savolainen (2000), and Maume and Lee (2003) each used the Gini coefficient as their measure of economic inequality; Messner and Rosenfeld (1997) and Savolainen (2000) also utilized an index of economic

discrimination; Schoepfer and Piquero (2006) employed percent unemployed as their measure of the strength of the economy; while Messner and Rosenfeld (1997), Hannon and DeFronzo (1998), and Stucky (2003) each employed an index economic deprivation consisting of several of the indicators employed by the other studies. The present study employs the Gini coefficient of household income to measure economic inequality or relative deprivation. This coefficient ranges in value from 0 to 100 with a score of 0 representing perfect income equality and a score of 100 representing a perfectly unequal distribution of income.⁵

Finally, one would expect anomie to be present in situations where the strength of the economy was high. In other words, a strong economy will operate to enhance the impact of income inequality on homicide rates. It should be noted that the direct impact of economic strength or GDP may in fact be negative. Messner and Rosenfeld (2007, 19) note that GDP, as a measure of economic development, may reduce rates of violent crimes in modern nations characterized by urbanization and industrialization. The "modernization thesis" hypothesizes that development is negatively related to violent crime (Shelley 1981). Similar arguments have been made that increased development reduces the opportunities for interpersonal contacts that can enhance homicide rates (LaFree and Kick 1986; Messner and Rosenfeld 1997). The dominance or strength of the economy is measured by the Gross Domestic Product in U.S. dollars. Because of the highly skewed nature of this variable the log value of the gross domestic product is utilized in the analysis.

Our current measure of anomie is a multiplicative function of each of the three measures above. One would expect conditions of anomie to be highest in situations where one has a strong economy operating on free market principles coupled with high levels of economic inequality or restricted opportunities for some segments of society (i.e., want amid plenty). To accommodate the inclusion of the

⁴ The variable was originally measured on a scale from 1 to 5 with high scores representing policies that were least conducive to economic freedom. In the current analyses the variable was

rescaled from 0 to 4 and then reversed coded so that higher scores represented greater economic freedom. For further information see <http://www.heritage.org/research/features/index>.

⁵ For countries with missing data on the Gini coefficient, aggregated mean substitution was utilized (by region and the United Nations human development code).

necessary two-way and three-way cross-product interaction terms comprised by each of these three correlated measures, we have mean-centered each.

Economic growth. Economic growth can serve as an indicator of the advancement of a country's economy. By facilitating increased consumption, economic growth has the propensity to impact many aspects of citizens' quality of life. Perhaps most relevant to the study of anomie is its propensity to generate additional "wants" for citizens. Ironically, although economic growth can reduce absolute poverty, it can also increase income inequality, potentially leading to lesser abilities of segments of society to achieve prosperity in this environment – which should, according to anomie theory, facilitate crime. In our study economic growth is measured by the annual percentage growth of the gross domestic product. To negate potential yearly fluctuations in this measure, the annual percentage growth in GDP was averaged for the years 1995 – 97. This measure is included to control for the potential that a country's economic growth might confound the observed relationship between its economic strength and crime rates. In addition, the country's total population is included as a control variable.

Non-economic institutions.

(a) The family

Messner and Rosenfeld (1994) stipulate a need to control for the strength of non-economic social institutions, specifically the family, polity, and education. One of the most consistently utilized measures of the weakening of the family unit is the divorce rate (Chamlin and Cochran 1995; Piquero and Piquero 1998; Maume and Lee 2003; Schoepfer and Piquero 2006). While this measure is subject to certain qualifications, including differential definitions of divorce cross-nationally, it is commonly used in macro-level research as an indicator of family disruption (Maume and Lee 2003; Gartner 1990).⁶ High divorce rates, as a measure of family disruption – indicating a breakdown of the traditional nuclear family as well as a measure of the permeation

of economic norms – is a more complete measure of extent to which the family has been devalued as economic values have been accommodated.

(b) The polity

As a social institution, the political system is utilized to promote and attain collective goals, unless co-opted by the economy (Messner and Rosenfeld 2001, 65). Messner and Rosenfeld (2001, 76–97, 104–106) further maintain that involvement in the political process can promote a sense of community and lead to a reduction in anomie. They also point to low voter turnout as an indicator that the polity is devalued (2001, 71). Accordingly, the ineffectiveness of the polity was measured by the lack of voter turnout at the latest election. That is, this measure was created by subtracting the percentage of the population that voted at the last election from 100.

(c) Education

Messner and Rosenfeld (2001) point to the importance of the educational system as a socializing agent. They stress that the educational system is also responsible for preparing youth for their occupational roles (2001: 66). Consistent with previous examinations of the theory, the strength of the educational system is measured by educational expenditures as a percentage of GDP (Maume and Lee 2003). So that all measures of non-economic institutions reflect the inability of these institutions to mediate the effects of the economy, the weakness of the educational system is measured by subtracting the educational expenditures from 100 so that high scores indicate weak educational systems.

3. Findings

Table 1 presents OLS regression models for the effects of our three indicators of economic strength, economic growth, and the three indicators of the strength of non-economic social institutions on cross-national rates of homicide. Our findings are somewhat mixed. Firstly, the most parsimonious model (Model 1: direct effects of economic conditions

⁶ To the extent to which various countries have different wait periods and/or procedures for attaining a divorce, we would expect that

our measures would be a conservative estimate of family disruption and simply underestimate the true impact of this concept.

without controls) accounted for 52 percent of the variance in the cross-national rates of homicide; the inclusion of the two-way and three-way cross-product terms among the economic indicators (Model 2) raised the variance explained to 64 percent and the full model (Model 3), which added the control variables, increased the variance explained to 71 percent. Next, based on the extant research literature which has examined the direct effects of economic conditions on cross-national rates of crime, we anticipated that the effect of economic inequality (i.e., Gini coefficient) on crime would be positive and we observe as much. Likewise, with regard to the direct effect of the economic freedom index, we anticipated a positive effect and that is what we observed, though non-significant. Finally, consistent with modernization theory we find the direct effect of gross domestic product to be negatively associated with the cross-national rate of homicide. This finding is consistent with research demonstrating that modernization or economic development is associated with a decrease in interpersonal violence (Messner and Rosenfeld 1997; Antonaccio and Tittle 2007).

Table 1: OLS regression – the relative effects of the components of institutional anomie on cross-national rates of homicide

	Homicide rates		
	Model 1	Model 2	Model 3
Gini	.057**	.075**	.061**
GDP	-.644*	-.723**	-.716**
Economic freedom	.360	.298	.507
GDP*Gini		.072**	.064**
Gini*Freedom		.049	.064
GDP*Freedom		-.337	-.222
Gini*GDP*Freedom		.060	.082*
Family			-.003
Polity			.027*
Education			-.168
Economic growth	-.060	.001	.011
Total population	7.18E-009	5.43E-009	6.30E-009
R2	.52**	.64**	.71**
V.I.F.	< 2.95	<3.46	< 3.56

* P < .05

** P < .01

Messner and Rosenfeld, like Merton, have conceptualized structural anomie to be present under conditions in which (1) the dominant culture prescribes as legitimate the goal of economic security (i.e., a cultural emphasis on wealth accrual, represented here as the economic freedom index), (2) the structural organization of the economy permits the acquisition of great wealth (i.e., economic strength represented here by the gross domestic product), but (3) the structural organization of society blocks the access of some of its members to the legitimate means to attain this goal (i.e., relative deprivation/economic inequality/blocked opportunities, represented here by the Gini coefficient). Model 2 introduces interactive effects among these three measures of economic conditions (i.e., two- and three-way cross-product terms) to test this thesis. This more complex model substantially increased the variance explained compared to its more parsimonious counterpart. The main effect of economic inequality attained statistical significance, as did one of its two-way interactive effects (with GDP). High levels of economic inequality are associated with high levels of homicide, especially in countries with a strong economy. The effect of the three-way interaction term is positive as expected, but it fails to reach a level of statistical significance.

Finally, Model 3 of Table 1 introduces controls for the strength of non-social institutions and economic growth to the conditioned effects models just discussed. The addition of these control variables did little to alter the findings for the significant predictors in Model 2. The variance explained increased to 71 percent. As before, cross-national rates of homicide are positively associated with high levels of economic inequality and are reduced by a strong economy, for nations at mean levels on the respective conditioning variables. The statistically significant two-way interaction between economic inequality and economic strength remains significant. However, in this fully specified model, the hypothesized three-way interaction term is also significantly positive. This indicates that the effect of economic inequality on the rate of homicide is enhanced by a strong economy, especially where the culture stresses economic freedom and wealth attainment.

The findings observed for the effects of the strength of non-economic institutions are somewhat mixed. Only the polity

achieves statistical significance. As expected, poor voter turnout is positively associated with higher cross-national rates of homicide. Economic growth and the country's population size are not significantly associated with the cross-national rate of homicide.

4. Conclusion

Without question one of the most vexing problems facing researchers trying to test structural or institutional anomie theories is the operationalization of anomie. This challenge is magnified in the context of comparative criminology by the data constraints already present. As a result, researchers are forced to rely on indirect tests and often weak surrogate or proxy measures of key theoretical variables. This study offers a unique and, we believe, more theoretically sound operationalization of structural/institutional anomie. We argue that a theoretically sound operationalization of anomie should address the joint societal conditions minimally necessary for structural anomie to be operative and under which economic inequality can then lead to increased rates of crime cross-nationally. Messner and Rosenfeld, like Merton, have conceptualized structural anomie to be present when the dominant culture prescribes as legitimate the goal of economic success, and the strength of the economy permits the acquisition of great wealth, but the structural organization of society blocks the access of some of its members to the legitimate means to attain this goal (to this Messner and Rosenfeld add a fourth condition: non-economic social institutions are not sufficiently strong to offset these anomic and criminogenic conditions). We have argued with regard to these three necessary elements of an anomic society that an examination of their independent or relative effects, which is normative for this area of research, constitutes a theoretical misspecification of both Mertonian structural anomie and Messner and Rosenfeld's conceptualization of institutional anomie. We believe structural anomie is best conceptualized as a multiplicative construct involving direct, two-way, and three-way interactions.

We tested the efficacy of such a construct to explain cross-national variation in the rate of homicide while controlling for the strength of several non-economic social institutions. We used the Economic Freedom Index developed by

Heritage Foundation (O'Driscoll, Holmes, and O'Grady 2003) as our measure of a cultural emphasis on economic accrual, the gross domestic product as our measure of the economic strength of a nation-state (with population size controlled), and the commonly employed Gini coefficient as our measure of blocked opportunities. Our results are supportive of the efficacy of this construct to explain cross-national variation in the rate of homicide. That is, several of our multiplicative functions were (as expected) significantly associated with cross-national rates of homicide.

Table 2: Predicted rates of homicide under varying economic conditions

Gini index:	GDP:	Economic freedom index:	Predicted homicide rate:
Average	Average	Average	3.080
High	High	High	143.452
High	High	Low	0.693
High	Low	High	7.396
High	Low	Low	5.254
Low	High	Low	1.578
Low	High	High	0.087
Low	Low	High	53.144
Low	Low	Low	2.869

Note: Predicted rates (log) were computed at "average" (mean), "high" (1.5 standard deviations above the mean) and "low" (1.5 standard deviations below the mean) values of the economic condition variables and the means of the exogenous control variables. These combinations of high and low values of the economic conditions measures constitute hypothetical cases and do not represent any real cases in these data.

More importantly, predicted rates of homicide generated from the parameter estimates in Model 3 reveal the dramatic effect of structural anomie (see Table 2). Uniquely high rates of homicide are predicted for those societies characterized by high levels of both economic freedom and economic inequality (143.452 compared to the average predicted rate of 3.080 and all other predicted rates ranging from a high of 53.144 to a low of 0.087). Such societies are characterized by the joint effects of a powerful cultural force that elevates aspirations for economic success and converts these cultural aspirations into expectations and high levels of economic inequality. In such societal arrangements, where there is a culture that fosters economic attainment and a strong economy to make manifest these economic goals and values but high levels of economic inequality have foreclosed the legitimate opportunities for economic attainment (i.e.,

where there is “want amid plenty”), homicide finds expression. Such societies are structurally anomic as specified by Merton and by Messner and Rosenfeld.

It is important to note that this research is not immune to the criticism leveled at other aggregate tests of structural or at institutional anomie theories or at cross-national research in criminology. Missing data on key concepts necessarily restricted the number of nation-states that could be examined. Likewise, the analysis fails to control for other measures known to influence homicide rates (e.g., absolute deprivation/poverty, urbanism, etc.). This research, however, does underscore the importance of refining our operationalization of key theoretical constructs. We need to continue our focus on developing appropriate measures of our theoretical concepts and more directly testing our theories to gain a better understanding of the variation in crime rates cross-nationally.

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Appendix A: Measures and Data Sources

Measures	Data source
Crime:	
Homicide Rates	International Crime Statistics (Interpol 1997). World Health Statistics Annual, 1997-1999, online edition (World Health Organization 2000).
Economic conditions:	
Economic freedom	Heritage Foundation.
GDP, annual % growth, and total population	World Development Indicators 2001, CD-ROM (World Bank 2001).
Gini coefficient	World Inequality Database World Institute for Economic Research. World Resources Institute Facts and Figures: Environmental Data Tables World Resources Institute.
Family:	
Divorce rates	International Marketing Data and Statistics, 2001.
Education:	
Public expenditures on education as a % of GNP	World Development Indicators 2001, CD-ROM (World Bank 2001).
Polity:	
Voter Turnout	Human Development Report, 2000, United Nations.

Appendix B: Description of Study Variables

	Minimum	Maximum	Mean	Standard deviation
Logged GDP	9.249656	12.91587449	10.75507191	0.891014423
Income inequality	19.5	59.3	34.02122449	9.286159646
Economic freedom	1.5	4.65	2.758163265	0.676337174
Economic growth	272000	271542464	26263040.45	46203417.01
Total population	0.1	64	26.01979592	20.74040747
Family disruption	5	64	28.51020408	13.67193361
Polity	2.2	9.7	5.42244898	1.6919251
Education	-0.62861	4.801312462	1.188362056	1.320374672
Logged homicide rates	9.249656	12.91587449	10.75507191	0.891014423

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Anomic Crime in Post-Welfarist Societies: Cult of the Individual, Integration Patterns and Delinquency

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Anomic Crime in Post-Welfarist Societies: Cult of the Individual, Integration Patterns and Delinquency

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Post-Fordist economies come along with post-welfarist societies marked by intensified cultural individualism and increased structural inequalities. These conditions are commonly held to be conducive to relative deprivation and, thereby, anomic crime. At the same time, post-welfarist societies develop a new “balance of power” between institutions providing for welfare regulation, such as the family, the state and the (labour) market—and also the penal system. These institutions are generally expected to improve social integration, ensure conformity and thus reduce anomic crime.

Combining both perspectives, we analyse the effects of moral individualism, social inequality, and different integration strategies on crime rates in contemporary societies through the lenses of anomie theory. To test our hypotheses, we draw on time-series cross-section data compiled from different data sources (OECD, UN, WHO, WDI) for twenty developed countries in the period 1970–2004, and run multiple regressions that control for country-specific effects.

Although we find some evidence that the mismatch between cultural ideal (individual inclusion) and structural reality (stratified exclusion) increases the anomic pressure, whereas conservative (family-based), social-democratic (state-based) and liberal (market-based) integration strategies to a certain extent prove effective in controlling the incidence of crime, the results are not very robust. Moreover, reservations have to be made regarding the effects of “market” income inequality as well as familialist, unionist and liberalist employment policies that are shown to have reversed effects in our sample: the former reducing, the latter occasionally increasing anomic crime.

1. Introduction

The anomie concept originating in the classic works of Durkheim (1984 [1893], 1952 [1897]) and Merton (1938, 1968 [1949]) has inspired large strands of criminology on both sides of the Atlantic (Rock 2002; Deflem 2006). But anomie is not confined to the sociology of crime; it also figures prominently in sociology as such: As a somewhat fuzzy, “complex” and “multidimensional” concept (Sztompka 1998), it provides heuristic guidance for sociological theory-building at the interface of normative and factual orders (*nomos*) and orients macrosociological research towards problems of integration and regulation. The causes and functions of deviance and delinquency are thus not only found in society at large; societies themselves are made up by “nomic” as well as “anomic” processes (Marks 1974).

Focussing on anomic crime in post-welfarist societies, this paper aims to contribute both to general and criminal sociology: By analysing the interplay of culture and structure and the interaction of major institutions (state, market, family) in “ordering”, “dis-ordering” and “re-ordering” society, we provide a macrocontextualization of individual delinquency through the prism of anomie theory.

In our theoretical approach, we combine classic elements of both the Durkheimian and the Mertonian tradition and also benefit from recent developments in “institutional-anomie theory” (Messner and Rosenfeld 1994, 2006; Rosenfeld 2006). The latter parallels our own efforts in linking up to comparative research on the social foundations of welfare capitalism (Esping-Andersen 1990, 1999). By including insights from this field of study, we hope to shed new light

on the tensions between individualization and integration in contemporary societies (Thome 2007).

Empirically, we build on research in the fields of “inequality and crime” and “institutions and crime”. We develop a model that combines conceptual and statistical features of state-of-the-art studies in both areas but adopts an original set of hypotheses based on our theoretical approach. Drawing on time-series cross-section data for twenty developed countries, we run multiple regressions that allow us to describe crime-generating mechanisms within and across welfarist and increasingly “post-welfarist” societies net of country-specific effects (Dean 1999).

2. Theoretical Background

In the following, we will briefly describe the different components of our theoretical approach and the anomie concept underlying our empirical study.

The first component of our approach figuratively goes back to Merton standing on the shoulders of Durkheim (Merton 1965), and basically refers to a mismatch between culture and structure at the macrosocial level that generates anomic pressure at the microsocial level: individuals who do not have the (structurally given) opportunities to live up to the (culturally prescribed) goals might thus turn to criminal careers. This rather rudimentary reading of the classic anomie concept can be enriched by Durkheim’s focus on cultural inclusion, namely the “cult of the individual” (1973a [1898], 1961 [1952]), and Merton’s focus on structural exclusion, experienced as “relative deprivation” (1968 [1949]; Merton and Kitt 1950). With respect to these notions, we would argue that the “inclusive” ideal of individual achievement also generates the “exclusive” reality of individual underachievement. The anomic conflict between an individualistic culture of competition and success on the one hand and stratified and precarious opportunities to compete and succeed on the other hand would thus be inherent in capitalist societies and generate a “normal” level of crime.

The second component of our anomie concept adds “social institutions” to this picture, as suggested by institutional-anomie theory. Whereas institutions have been in the centre of sociological interest from the very beginning (Durkheim 1966 [1895]), criminology still stands to gain from institutional analysis: Starting from this assessment, Messner and Rosenfeld commit themselves to “explaining different levels and forms of crime with reference to three analytically distinct types of institutional configurations that reflect differences in the articulation of institutions, or differences in the ‘institutional balance of power’” (2004, 96). The three ideal-typical institutional configurations they refer to are inspired by Esping-Andersen’s original “three worlds of welfare capitalism” (1990) and his later emphasis on the “inter-causal triad of state, market and family” (1999, 35). Using the same references, we will distinguish between three strategies of social integration that capture the different emphasis welfare regimes put on the role of the state, the labour market, and the family. In this perspective, anomic crime results from institutional failure.

The third component complements our approach and integrates the aforementioned aspects. Assuming that the crime-generating mechanisms suggested by our “classic” and “institutionalist” readings of the anomie concept point to different, albeit related dimensions of the problem at hand, we combine them in a larger framework. The first dimension, namely the conflict between cultural inclusion (promising individual achievement) and structural exclusion (perpetuating individual underachievement), thus interacts with the second dimension, namely the interplay and respective performance of major institutions (state, market, family) in providing welfare regulation and social integration. In this sense, crime is a result of both individual failure “to conform” and institutional failure “to integrate”.

¹ Countries included in the sample are Austria, Australia, Belgium, Canada, Denmark, Finland, France, Germany, Ireland, Italy, Japan, Korea, the Netherlands, New Zealand, Norway, Spain, Sweden, Switzerland, United Kingdom, and United States.

This twofold understanding of anomie is embedded in a larger framework of macrosociological theories that deal with societal transformations in the age of “globalization” and account for cross-national convergence and divergence at the same time. In this context, we would assign the cult of the individual and its neoliberal excesses to the level of world culture. The presumptions—and impositions—of rational actorhood and self-government are thus seen as factors of global convergence (Meyer and Jepperson 2000; Foucault 2007, 2008). In contrast, patterns of social integration are generally attributed to the national level, where strong institutional complementarities and path-dependencies seem to preserve distinct regulatory cultures and varieties of capitalism (Hall and Soskice 2001; Streeck and Thelen 2005).

By integrating the tension between global convergence (with respect to cultural values) and national divergence (with respect to institutional realities) into our model, we strive for a better understanding of the globalized division of labour and its characteristic problem of order. In other words, we expect that post-Fordist economies come along with post-welfarist societies that can be described by a new cult of the individual and shifting patterns of integration as well as by typical (individual and institutional) failures generating anomic crime. Sociological theory and criminological research would thus once more benefit from each other (Garland and Sparks 2000).

3. Previous Research

In our theoretical model, we highlighted two mechanisms that offer complementary explanations for anomic crime. The first mechanism attributes individual delinquency to structural inequality in highly competitive societies, the second builds on the integration capacity of specific institutional configurations at the national level. Although we are not aware of empirical studies that are fully compatible with our approach, comparative research based on international crime statistics has recently clustered around problems of “inequality and crime” as well as “institutions and crime”. In the following, we will briefly sketch out some of the connections these studies have to our project and summarize the most relevant results.

Although comparative research on the criminogenic effects of inequality rarely starts from the “division of labour in society”, we will commence our short review once more with Durkheim (1984 [1893]), or rather with Messner’s “cross-national test of a Durkheimian model”. In this early study, Messner accounts for both “moral individualism” and “social inequality” and thus employs concepts that are largely consistent with the first component of our anomie concept, namely the cult of the individual on the one hand and the stratified opportunity structure on the other hand (1982, 229; 1989, 607). While the latter—social inequality—is measured by the Gini coefficient, the former—moral individualism—is operationalized by the school enrolment ratio (or, alternatively, the size of the Protestant population).

With this conceptual reminder, we will now turn to the state-of-the-art in comparative research on inequality and crime. Our main point of reference is a rather comprehensive and statistically sophisticated study by Fajnzylber, Lederman, and Loayza (2002). Their model is based on panel data (robberies: 37 countries, 1970–94; homicides: 39 countries, 1965–95) and accounts for country-specific effects. Net of controls (GDP growth, GNP per capita, urbanization and educational attainment), it establishes a positive causal link between income inequality, measured by Gini coefficient or P80/P20 ratio, and violent crime, namely robberies and homicides. Educational attainment (i.e. average years of education in the adult population) yields negative results with respect to homicides but positive results with respect to robberies (ibid., 18).

The main findings of the study—a robust positive link between inequality and crime—are questioned by Neumayer (2003; 2005). Like Fajnzylber, Lederman, and Loayza (2002), he accounts for country-specific effects but uses different samples (robberies: up to 59 countries, 1980–97; homicides: up to 117 countries, 1980–97), adds and varies explanatory and control variables (e.g. including social welfare expenditures, female labour force participation, percentage of male population aged 15–64; unemployment rate) and omits educational attainment for reasons of data availability and the inconsistency of previous results (2005, 105, fn. 1). While Neumayer substantiates his critique for bigger samples of countries that show no evidence for a causal link between inequality and crime, he also replicates the crime-inducing

effects of Gini coefficient and P80/P20 ratio in smaller samples (robberies: 33 and 30 countries respectively) that are comparable to those in the aforementioned study.

Research in the field of crime and institutions that concerns the second component of our approach largely centres around adherents and critics of institutional-anomie theory (Rosenfeld 2006). Comparative studies that try to “expand and maximize variation in institutional structure” (Messner and Rosenfeld 2004, 98) have been undertaken on the national level, preferably scrutinizing the anomic potential of the “American Dream” in its homeland (Messner and Rosenfeld 1994), as well as on the international level. While our project is mostly interested in the latter, research on crime in the United States also offers some conceptual advice.

Studies at the U.S. level specify the dependent variable either as property crime or violent crime (both including robberies) or instrumental and expressive homicides (Chamlin and Cochran 1995; Piquero and Leeper Piquero 1998; Maume and Lee 2003; Baumer and Gustafson 2007). Independent variables generally include income inequality (Gini coefficient or poverty rate) as a proxy for “economic dominance” in the institutional balance of power, and measures of the institutional strength of “non-economic” social spheres like the education system (e.g. school enrolment ratio), the polity (e.g. welfare expenditures), and the family (e.g. divorce rate). While income inequality is expected to increase delinquency, the education system is credited with a crime-reducing effect (Piquero and Leeper Piquero 1998, 69). The latter assumption stands in remarkable contrast to earlier accounts of the disintegrative potential of moral individualization through education (Messner 1982). Baumer and Gustafson (2007, 634–5) instead construct indices of “low educational and economic attainment” and “educational and income inequality” that are both expected to exert positive effects on crime.

Comparative research at the cross-national level is more restricted with respect to data availability and quality. Accordingly, the authors of the studies reviewed here (Messner and Rosenfeld 1997; Savolainen 2000; Pratt and Godsey 2003) take recourse to the homicide rate as depen-

dent variable and proxy for anomic crime. However, this is debatable: As mentioned above, homicides and robberies (or property crime more generally) do not always generate consistent results (Chamlin and Cochran 1995; Jensen 2002; Fajnzylber, Lederman, and Loayza 2002). As regards “institutional” variables, mainly income inequality (“economic dominance”) and decommodification measures (“political restraint”) are included, the latter inspired by Esping-Andersen (1990). Both are expected to exert independent and opposite effects on homicides (Messner and Rosenfeld 1997, 1402; Savolainen 2000, 1026). Control variables comprise several demographic and development indicators (e.g. sex ratio, GNP growth, urbanization). Despite their theoretical relevance, the institutional effects of education and family are not singled out but more or less subordinated to the political dimension (Savolainen 2000, 1023). In addition to these shortcomings, reservations have to be made regarding the estimation methods, in this case OLS or WLS regressions on the basis of relatively small samples ($n = 39, 45$ or 46) without controls for country-specific effects. Nevertheless, the results of the reported studies are in line with assumptions derived from institutional-anomie theory, namely a negative, i.e. crime-reducing, effect of decommodification (all three studies), a positive effect of inequality, and a negative interaction effect between income inequality and decommodification (Savolainen 2000; Pratt and Godsey 2003).

We will conclude this section with another desideratum of the “institutionalist” approach: Although the compilation referred to above (Rosenfeld 2006) includes an article on relations between welfare institutions and imprisonment (Sutton 2004), and in spite of ongoing discussions on a shift from “penal-welfare policies” of social support to post-welfarist strategies of “governmental control” (Garland 2000; Rose 2000), the penal system is not considered as a social institution, let alone as a “labour market institution”, as recently argued for the U.S. (Western and Beckett 1999; Western 2006; Münch 2007). Still, rising imprisonment rates are not only observed in liberal countries deemed “exceptional” in this respect but, for instance, also in Scandinavia (Lappi-Seppälä 2007). It thus seems appropriate to conceive of the “new punitiveness” as one of the strategies of

social integration in the repertoire of post-welfarist regimes (Pratt et al. 2005; Durkheim 1973b [1900]).

4. Rationale and Hypotheses

The focus of our research is the transformation of integration patterns in contemporary societies under the condition of intensified individualism and increased inequality. Through the lenses of anomie theory, the incidence of crime in a society indicates the effectiveness of institutions, or institutional configurations, in “integrating” individuals otherwise prone to delinquency, namely for reasons of relative deprivation. Comparative political economy has specified strategies of integration, or regulation, prevailing in certain types of welfare regimes but has also pointed out the widespread mix of these strategies and recent tendencies of convergence (Arts and Gelissen 2002; Powell and Barrientos 2004).

In order to map integration patterns at work in societies at the transition from welfarism to post-welfarism, we will therefore distinguish between three “typical” but usually “mixed” strategies of integration, namely a conservative (family-based) strategy, a social-democratic (state-based) strategy, and a liberal (market-based) strategy. The hypotheses suggested below then allow us to assess the institutional effectiveness of these different integration strategies at an aggregate level of analysis (countries x years; modelled in a pooled regression with fixed effects). That is, technically speaking, they do not refer to single countries or specific welfare regimes.

At first sight, this “generalized” approach might seem counterintuitive. Comparative research on welfare regimes usually builds on rather than neutralizes country-specific “fixed effects”, including not only permanent geographical constraints and “deep” cultural persistencies, but also institutional inertia and path dependencies. Still, the post-welfarist transformations to be explored in this paper arguably take place at a global level and thus entail a different research design that avoids any sort of “methodological nationalism”. Instead, it has to allow for and, if possible, single out supranational factors of convergence (notwithstanding remaining divergencies at the national level). Methodologi-

cally, we will thus focus on a “unitary” type of institutional change that in principle affects all countries and regimes represented in our sample, irrespective of their historical particularities and cultural idiosyncrasies, as suggested in the third component of our anomie concept.

Whereas the rationale of our research is thus to go beyond comparative welfare regime research, we will take account of the state-of-the-art in this field in at least two respects. On the one hand, we will employ the decommodification index, an empirical measure used to classify and distinguish different welfare regimes, as a shortcut for the “institutional balance of power” in a given country (Messner and Rosenfeld 1997). In Esping-Andersen’s pioneering work (1990), social-democratic, conservative and liberal welfare regimes were characterized by their—more or less—distinctive scores at the top, in the middle and at the bottom of a simple scale that assesses the generosity and conditionality of different social insurance programmes (pensions, unemployment benefit, sick pay). In the context of a macrosociology of crime, updated versions of the decommodification index may thus serve as a proxy for prevalent institutional constellations or integration patterns (Scruggs and Allan 2006). Nevertheless, this measure is not only contested in its discriminatory power regarding different types of welfare regimes but also limited in its explanatory power regarding “regime-specific” institutional constellations and their role in containing anomic crime.

On the other hand, we will therefore replace the decommodification index by a range of indicators that spell out the institutional effects of the family, the state and the labour market for the problem at hand. On a conceptual level, we employ the notion of integration strategies in order to point to underlying socio-political choices; empirically, we will however focus on the factual weight of these institutions and their causal links to anomic crime. Moreover, we do not necessarily consider the institutional effectiveness of family-based, state-based and market-based integration strategies to be contingent on the welfare regime classification of the respective countries but will allow for one-sided as well as mixed institutional constellations at an aggregate level of analysis.

Figure 1: Theoretical components and expected effects (general)

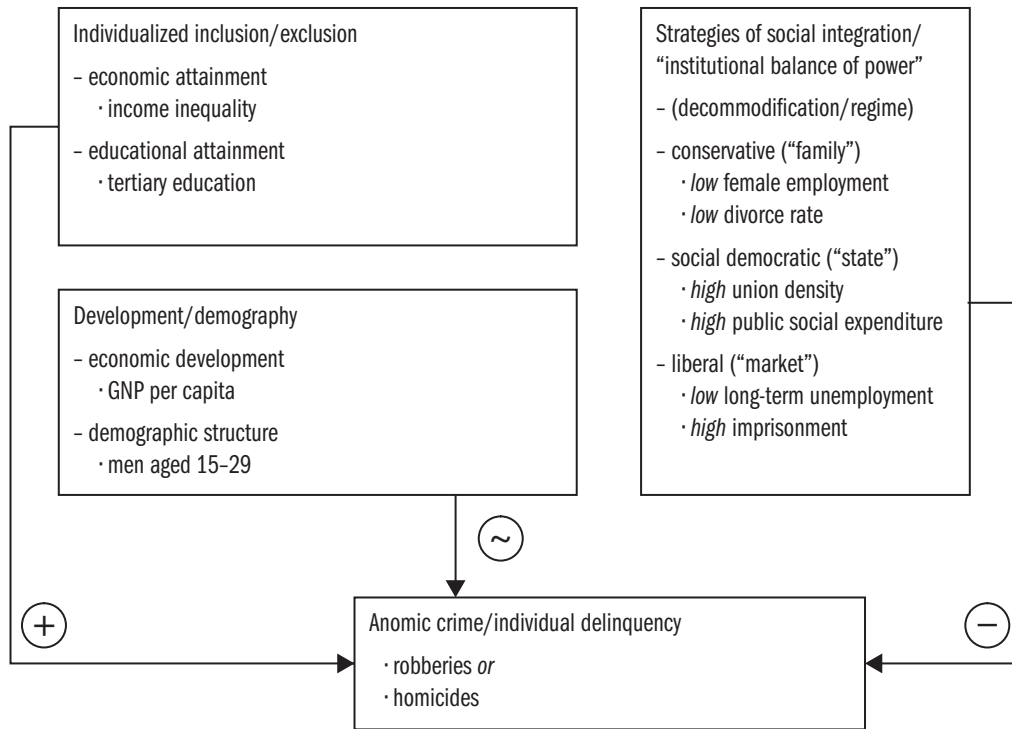
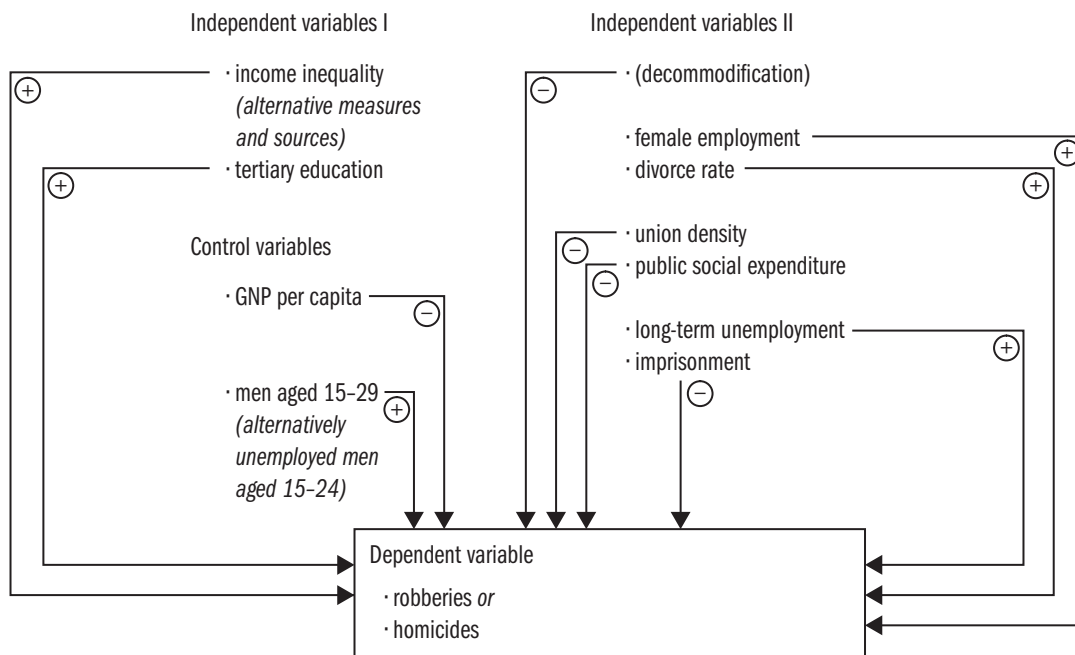


Figure 2: Theoretical components and expected effects (detailed)



The following hypotheses are meant to operationalize the first and second component of our anomie concept and allow for empirical testing (see Figures 1 and 2). The third component is reflected in our methodology and modelling strategy.

With respect to the first component of our anomie concept, we emphasized the cult of the individual at the cultural level and relative deprivation at the structural level. The “inclusive” ethos of individual success thus comes along with the “exclusive” experience of individual failure. Two alternative considerations lead us to identical hypotheses: On the one hand, we can follow Messner (1982) and represent the cultural and structural dimensions of societal transformations as “moral individualism” (school enrolment) and “social inequality” (income inequality). On the other hand, we can highlight the ambiguities that the cult of the individual engenders for the school system and the labour market, namely strengthened individual competition, increasing inequalities and individual failure as the downside of educational and economic attainment.

Whereas the assumption that income inequality reinforces crime is widely held in the literature (see above), it seems less obvious to postulate a positive link between school enrolment and crime, as we do in this paper. In contrast, scholars in the institutional-anomie tradition would rather interpret this indicator as a measure of the institutional strength of the educational system which helps, in their accounts, to counterbalance market forces and thus contain anomic crime. Moreover, following Durkheim, there is a fine line between “moral” and “excessive” individualism which is conceptually important (Thome 2007), but, in the case at hand, empirically almost intractable (as one and the same indicator might represent both).

Acknowledging these objections, we would like to restate our argument that greater emphasis on educational attainment also implies greater emphasis on individual achievement in education and on the market. The individual’s inclusion in society therefore depends less on his/her protection by collective associations such as unions and the state and more on his/her individual ability to achieve. In this situation, there should be greater chances for under-

achievement compared to expectations than in a situation of more collectivistic protection of the individual. This means relative deprivation, which implies greater propensity to compensate for underachievement using illegitimate means, and thus increases delinquency.

Hypothesis 1a: Higher income inequality increases anomic crime.

Hypothesis 1b: Higher school enrolment increases anomic crime.

With respect to the second component of our anomie concept, we distinguish between three strategies of integration that rely on the institutional effectiveness of the family, the state and the labour market respectively and thus provide different mechanisms of social support and/or control that ensure conformity and reduce delinquency. The hypotheses below are formulated in the perspective of typical proponents of these conservative, social democratic and liberal integration strategies; in other words, it is taken for granted that institutional effectiveness meets ideological expectations. The validity of these claims can then be tested empirically.

Conservative integration strategies rely on the integrity and integrative capacity of the family, currently challenged by trends of family disruption as well as “defamilialization” (Esping-Andersen 2000).

Hypothesis 2a: Higher female employment increases anomic crime.

Hypothesis 2b: Higher divorce rates increase anomic crime.

Social democratic integration strategies rest on the regulatory and redistributory capacity of the state and intermediate organizations that implement policies of “decommodification” (ibid.).

Hypothesis 3a: Higher union density reduces anomic crime.

Hypothesis 3b: Higher public social expenditure reduces anomic crime.

Liberal integration strategies mainly build on economic incentives and market allocation and thus tend towards

“re-commodification” (from welfare to workfare). Besides labour market flexibility, we will also consider punitive policies as part or complement of these strategies.

Hypothesis 4a: Higher long-term unemployment increases anomic crime.

Hypothesis 4b: Higher imprisonment rates reduce anomic crime.

The paired hypotheses 2, 3 and 4 that refer to the second component of our anomie concept replace the more general assumption prominent in institutional-anomie research that decommodification is negatively related to crime (Messner and Rosenfeld 1997; Savolainen 2000; cf. Batton and Jensen 2002; Jensen 2002). In other words, the degree of commodification or decommodification that characterizes and classifies a welfare regime (e.g. as measured by the decommodification index) can be taken as a proxy for the institutional balance of power. A “commodified” society would thus *ceteris paribus* produce more anomic crime than a “decommodified” society. Although this baseline argument conflates the different components unfolded in our anomie concept, we will test it as initial hypothesis in our modelling strategy (see below).

A final remark has to be made with respect to “anomic” crime as the dependent variable in all these hypotheses. Cross-national institutional-anomie research has focused so far on homicide rates and neglected alternative measures. We will instead take robbery rates as the point of reference in our model and then compare the results with homicide rates. While the former seems preferable for theoretical reasons, namely its closer nexus with relative deprivation, the latter is often preferred for empirical reasons, namely the problem of cross-national data reliability (Fajnzylber, Lederman, and Loayza 2002, 8–9; Pratt and Godsey 2003, 619; Sutton 2004, 180).

5. Data and Methods

The operationalization of broad sociological concepts (such as cult of the individual, integration patterns, anomic crime) is largely constrained by the availability of appropriate data, and this particularly applies to comparative research at the cross-national level. Faced with the gap

between theoretical ambitions and empirical options, our approach to data analysis and interpretation goes beyond hypothesis-testing in the strict sense and also involves an exploratory component. Bearing in mind the ambiguities of macrosociological research designs, we are not only interested in the details of particular findings but also in general patterns that emerge from sorting and comparing a large number of results. In this respect, our assessment draws on the signs and significance but not on the size of indicated effects. In the following sections, we will briefly specify the data and methods used in our empirical study (for more information see Appendix, Table A1).

Dependent variables. We compare two different dependent variables as proxies for the incidence of crime: robbery rates and homicide rates. Data for the number of robberies per 100,000 people are taken from the UN Survey of Crime Trends. Although this survey also gathers data about the number of homicides per 100,000 people, we draw our homicide data from the WHO, because this source covers a larger timespan. As our two dependent variables have a rather skewed distribution, we use the robbery rate and homicide rate expressed in natural logs, thereby following, for example, Fajnzylber, Lederman, and Loayza (2002).

Independent variables. The dependent variables are expressed as a function of the different variables of our theoretical model. To measure income inequality (hypothesis 1a), we use two alternative indicators: Gini coefficient and P90/P10 ratio. For both variables we can draw on OECD data. But as the OECD Gini coefficient is only available for very few years, we alternatively use data compiled from different sources in the World Income Inequality Database (WIID) provided by the World Institute for Development Economics Research of the UN University (UNU-WIDER). However, combining data from different sources in a single database engenders problems of compatibility. Therefore, we use both OECD and WIDER data sets and compare the results, whereby we imputed missing values for the OECD Gini coefficient. Regarding WIDER Gini coefficient and WIDER P90/P10 ratio, we only included data characterized as good quality (categories 1 and 2 of the quality rating). The OECD P90/P10 ratio is based on data available from the OECD Labour Force/Earnings Statistics and comes

closest to our ideal measure of “market” income inequality: unlike income inequality measures based on household disposable income, the earnings ratio is directly linked to disparities in economic attainment (and, thereby, relative deprivation) irrespective of governmental redistribution. A “pre-government” inequality indicator also sharpens the contrast with integration indicators, most of which are “post-government” in fact.

For school enrolment (hypothesis 1b) we use tertiary school enrolment rates. We also include the female employment rate and the divorce rate (hypotheses 2a and 2b), the union density rate and the rate of public social expenditure (hypotheses 3a and 3b) as well as the long-term unemployment rate and the imprisonment rate (hypotheses 4a and 4b). As incidence of crime and imprisonment rate might be co-determined, the imprisonment rate enters our model as an endogenous variable. We thus assume that the crime rate (dependent variable) is not only affected by the imprisonment rate (independent variable) but also conversely the imprisonment rate by the crime rate. All other independent variables are treated as exogenous in our model. As control variables, we include additionally the share of men aged 15–29 (and, alternatively, the share of unemployed men aged 15–24) as well as GDP per capita, and furthermore a set of time dummy variables (one dummy for each year) to control for a possible time trend.

As mentioned for the Gini coefficient above, our variables are not available for all the years. Dropping all the cases with missing values would considerably reduce the sample size. Hence, we imputed missing values using the command *ipolate*, which is implemented in Stata. Imputation of missing values is not unproblematic as the available information is used in an inflationary manner. Moreover, imputation can obtrude a time trend into the data. This can yield biased estimation results. Hence, we tried to constrain the imputation to a “reasonable” degree and checked the means, minimum, and maximum of our original data with the imputed values.

Estimation methods. It has been shown in the literature that crime data exhibit inertial properties (Fajnzylber, Lederman, and Loayza 2002; Neumayer 2003, 2005). Hence, the

lagged dependent variable has to be included on the right hand side of our estimation model and a dynamic (lag-dependent) panel approach seems appropriate.

Consider the following dynamic panel model:

$$y_{it} = \alpha y_{i,t-1} + x_{it}'\beta_1 + w_{it}'\beta_2 + v_i + \varepsilon_{it} \quad i = 1, \dots, N \quad t = 1, \dots, T$$

whereby x_{it} is a vector of strictly exogenous variables (which may contain time dummy variables), w_{it} is a vector of endogenous covariates (comprising here only imprisonment), β_1 and β_2 are vectors of parameters to be estimated, v_i is the country-specific effect (which can be correlated with the covariates), and ε_{it} is the idiosyncratic error term. It is assumed that the country-specific effects and the error term are independent for each country over time.

The inclusion of the lagged dependent variable makes standard estimators inconsistent as, by construction, the lagged dependent variable is correlated with the error term. A usual way to deal with this problem is to instrument the lagged dependent variable with further lags. Therefore, we apply a generalized method-of-moments (GMM) estimator, which was developed by Arellano and Bond (1991). Accordingly, lagged levels of the dependent variable and of the endogenous variables are used as GMM-type instruments. Additionally, first differences of the exogenous variables are generated to serve as standard instruments. Hence—through the first differencing—the country-specific effect is removed from the equation.

This yields the following equation to be estimated:

$$y_{it} - y_{i,t-1} = \alpha(y_{i,t-1} - y_{i,t-2}) + \beta_1'(x_{it} - x_{i,t-1}) + \beta_2'(w_{i,t-1} - w_{i,t-2}) + (\varepsilon_{it} - \varepsilon_{i,t-1})$$

In addition to this so-called “Difference GMM” we apply the “System GMM”. This estimator was developed by Blundell and Bond (1998) extending the work of Arellano and Bover (1995). Whereas the “Difference GMM” uses lagged levels as instruments in the differenced equation, the “System GMM” uses additionally lagged differences as instruments for the level equation (for a detailed description of the two estimators see also Fajnzylber, Lederman, and Loayza 2002).

Modelling strategy. Regarding our modelling strategy, we introduce the explanatory variables in the following order: In the first step, we only include measures representing the first component of our anomie concept, namely income inequality (Gini coefficient or P₉₀/P₁₀ ratio) and school enrolment, as well as control variables, i.e. GDP per capita and men aged 15–29 (or, alternatively, unemployed men aged 15–24). We assume that these variables are independent of each other and restrict our analysis to their main effects; we thus do not model interaction effects. As our model builds on first differences, multicollinearity concerns proved negligible (see below).

In the second step, we include the decommodification index that acts both as a regime indicator (testing the relevance of welfare regime classification) and as a rough proxy for the second component of our anomie concept. Again, we assumed that this measure is not significantly correlated with previous variables.

In the remaining steps, we replace the decommodification index by our six explanatory variables that represent conservative, social democratic and liberal integration strategies based on the institutions of the family, the state and the labour market. Although there might be reason to expect significant bivariate correlations between each pair of indicators representing the same strategy, we generally assume that the measures are independent of each other and thus do not model indices. Taking the first differences of the variables, multicollinearity indeed turned out to be a minor problem both within and between the different strategies. Nevertheless, we introduce the indicators not according to the regimes (conservative, social democratic, liberal) or institutions (family, state, market) they are derived from but according to the idea of a “welfare mix” or “institutional balance” of different integration strategies. In the third step,

we thus only include indicators closely related to labour market policies (female employment, union density, long-term unemployment) and in the fourth step only indicators of a more general socio-political nature (divorce rates, public social expenditure, imprisonment). Finally, we test the full model encompassing all institutional indicators, except for the decommodification index. Again, we rely on the main effects of the variables and abstain from modelling interaction effects or indices.

6. Results

Before we turn to the results of our multiple regression models, we will give some details on bivariate correlations computed both for pooled levels and pooled first differences (Fajnzylber, Lederman, and Loayza 2002, 10). Regarding multivariate statistics, we will focus on regression models using robberies as dependent variable since, on the one hand, we prefer this measure of anomic crime for theoretical reasons and, on the other hand, the respective datasets proved easier to handle in our modelling procedures.

Bivariate correlations. As mentioned before, our model mitigates the problem of multicollinearity by including variables only in their first differences (which also entails a considerable loss of information). From a methodological point of view, we thus have little reason to worry about unwanted correlations (Neumayer 2003, 629–30; 2005, 104–6). With respect to the variables introduced in the first two steps of our modelling strategy, there are no significant correlations net of fixed effects between any of the following variables: income inequality (OECD data) and tertiary education, GDP per capita and men aged 15–29 years, and decommodification. Only GDP per capita and unemployed men aged 15–24 years prove to be significantly correlated over time (Table 1).

Table 1: Selected bivariate correlations I (levels and first differences)

		OECD Gini	OECD P90/P10	Tertiary education	GDP per capita	Men aged 15–29	Unemployed men 15–24	Decommodification
OECD Gini	(a)	1.00	0.62*	0.40*	0.02	0.16*	0.21*	-0.75*
	(b)	1.00	0.04	0.04	0.09	0.07	-0.04	-0.03
OECD P90/P10	(a)		1.00	0.63*	0.21*	0.20*	-0.07	-0.60*
	(b)		1.00	-0.06	0.10	-0.05	-0.06	0.10
Tertiary education	(a)			1.00	0.38*	-0.38*	0.04	-0.21*
	(b)			1.00	-0.05	-0.10	0.06	-0.07
GDP per capita	(a)				1.00	-0.56*	-0.17*	0.22*
	(b)				1.00	0.03	-0.59*	0.11
Men aged 15–29	(a)					1.00	-0.16*	-0.31*
	(b)					1.00	-0.04	-0.04
Unemployed men 15–24	(a)						1.00	-0.20*
	(b)						1.00	-0.02
Decommodification	(a)							1.00
	(b)							1.00

(a) pooled levels; (b) pooled first differences

Table 2: Selected bivariate correlations II (levels and first differences)

		Decommodification	Female employment	Union density	Long-term unemployment	Divorce	Public social expenditure	Incarceration
Decommodification	(a)	1.00	0.30*	0.55*	0.22*	-0.30*	0.78*	-0.60*
	(b)	1.00	0.06	0.08	-0.07	0.02	0.03	0.10
Female employment	(a)		1.00	0.33*	-0.47*	0.52*	0.29*	0.24*
	(b)		1.00	-0.14	-0.40*	-0.06	-0.32*	-0.07
Union density	(a)			1.00	0.16*	-0.09	0.53*	-0.40*
	(b)			1.00	-0.07	0.09	0.25*	-0.08
Long-term unemployment	(a)				1.00	-0.46*	0.45*	-0.32*
	(b)				1.00	0.03	0.17*	0.05
Divorce	(a)					1.00	-0.09	0.57*
	(b)					1.00	0.02	0.11*
Public social expenditure	(a)						1.00	-0.28*
	(b)						1.00	-0.03
Incarceration	(a)							1.00
	(b)							1.00

(a) pooled levels; (b) pooled first differences

With respect to the variables introduced in the remaining steps of our modelling strategy, notable correlations over time only exist between female employment and long-term unemployment (-0.40), female employment and public social expenditure (-0.32), and public social expenditure and union density (0.25). It is especially noteworthy that controlling for fixed effects removes any correlation between the decommodification index on the one hand and institutional indicators on the other hand (Table 2). This is particularly striking in the case of our social democratic indicators: union density and public social expenditure, the more so as the latter is occasionally taken as a proxy for decommodification and is indeed highly correlated with this measure on the basis of pooled levels, i.e. as long as cross-country variation is taken into account (0.78).

In addition to multicollinearity issues, we also searched the correlation matrix for correlations that might be meaningful for understanding the (assumed) transition to post-welfarism and thus should be further explored in multiple regressions. On the basis of first differences, 25 of 105 possible correlation values in a matrix of 15 x 15 variables are significant at the 5 percent level, four of which have already been mentioned above. Regarding our dependent variables, robberies are correlated with Gini coefficient (0.15), divorces (0.15), men aged 15–29 (0.17) and GDP per capita (-0.14); homicides are correlated with P90/P10 ratio (0.18) and men aged 15–29 (0.11). Imprisonment—a variable hitherto neglected in institutionalist accounts of anomic crime—is correlated with divorces (-0.11), unemployed men (0.11) and GDP per capita (-0.21). One third of the significant correlations over time thus refers to the triangle of robberies, homicides and imprisonment. Three fifths refer to these variables and/or control variables.

Multiple regressions. To test our hypotheses and explore the patterns of “post-welfarist” change in the timespan covered by our data, we ran a large number of regressions both for

robbery and homicide rates. In the following, we will focus on the results obtained for robberies and just briefly refer to regressions based on homicides.

With respect to robberies, our model is supported overall by the standard tests for GMM estimations, which do not produce evidence for model misspecification. The Sargan test showed that the null hypothesis that the overidentifying restrictions are valid could not be rejected. The Arellano-Bond (AB) test showed that the null hypothesis that there is no autocorrelation of first order in the first-differenced errors could be rejected; this was expected because when the idiosyncratic errors are independently and identically distributed, the differenced errors are first-order serially correlated. At the same time, the null hypothesis that there is no autocorrelation of second order in the first-differenced errors could not be rejected, and hence there is no evidence of second-order serial correlation in the first-differenced errors.

As we tested our model with alternative variables for income inequality (Gini coefficient and P90/P10 ratio, from two different sources) and alternative controls for the group of young men overrepresented in crime statistics (men aged 15–29 and unemployed men aged 15–24), there are eight versions of the model to be compared, four of which are documented in Tables 3 and 4 (for the descriptive statistics see Appendix, Table A2). Here, we only vary the inequality measures but not the control variables. We decided to be more explicit on the former since the results seem to question the positive link between income inequality and crime that is assumed above, widely described in the literature and also corroborated empirically (e.g. Fajnzylber, Lederman, and Loayza 2002). Nevertheless, we will also include information on the effects of varying the “demographic” control variable. Moreover, although more detail will be given for estimations with the “Difference GMM”, we will also briefly report findings for the “System GMM”.

Table 3: Robberies: Detailed results for OECD inequality measures

	Robberies (natural logs)											
	OECD Gini coefficient						OECD P90/P10 ratio					
	(1)	(2)	(3)	(4)	(5)	(5a)	(1)	(2)	(3)	(4)	(5)	(5a)
Robberies (lagged)	.891*** (0.000)	.888*** (0.000)	.891*** (0.000)	.875*** (0.000)	.847*** (0.000)	.923*** (0.000)	.911*** (0.000)	.906*** (0.000)	.927*** (0.000)	.913*** (0.000)	.933*** (0.000)	.948*** (0.000)
Income inequality (alternative measures)	-.002 (0.716)	-.002 (0.638)	-.001 (0.911)	.003 (0.533)	.006 (0.214)	-.000 (0.935)	-.098*** (0.000)	-.102*** (0.000)	-.079*** (0.003)	-.062** (0.012)	-.051** (0.047)	-.098*** (0.008)
Tertiary education	.002*** (0.003)	.002*** (0.002)	.002*** (0.005)	.001* (0.061)	.002** (0.020)	.000 (0.814)	.002** (0.033)	.002*** (0.009)	.002*** (0.007)	.001 (0.121)	.002* (0.085)	-.001 (0.688)
Decommodification		.004 (0.270)						.010*** (0.003)				
Female employment			.001 (0.577)		.004* (0.051)	-.002 (0.150)			-.000 (0.801)		-.003 (0.198)	-.002 (0.367)
Divorce				.026 (0.238)	.021 (0.371)	.061** (0.013)				.059*** (0.003)	.069*** (0.001)	.088*** (0.000)
Union density			.161 (0.199)		.039 (0.750)	.055 (0.614)			.356** (0.013)		.242* (0.079)	.044 (0.724)
Public social expenditure				-.003 (0.226)	-.001 (0.717)	.001 (0.818)				-.008*** (0.003)	-.008*** (0.004)	-.004 (0.489)
Long-term unemployment			0.000 (0.999)		.001 (0.272)	-.000 (0.829)			-.001 (0.435)		-.001 (0.368)	-.002* (0.058)
Imprisonment (lagged)				-.000*** (0.000)	-.000*** (0.000)	-.000** (0.039)				-.000 (0.101)	-.000 (0.313)	-.000 (0.236)
Men aged 15-29	.009*** (0.008)	.010*** (0.006)	.010** (0.012)	.009** (0.011)	.012*** (0.003)	-.002 (0.789)	.008** (0.018)	.008** (0.016)	.007* (0.074)	.010*** (0.004)	.007* (0.061)	-.002 (0.684)
GDP per capita	-.340*** (0.000)	-.374 (0.000)	-.341*** (0.002)	-.340*** (0.001)	-.375*** (0.000)	-.076 (0.215)	-.421*** (0.000)	-.537*** (0.000)	-.369*** (0.001)	-.464*** (0.000)	-.380*** (0.001)	-.185* (0.059)
Number of observations	401	401	401	401	401	417	390	390	390	390	390	401
Number of countries	16	16	16	16	16	16	15	15	15	15	15	15
Sargan test (Pr > chi2 =)	0.575	0.601	0.587	1.000	1.000		0.174	0.266	0.311	1.000	1.000	
AB test order 1 (Pr > z =)	0.000	0.000	0.000	0.000	0.000		0.000	0.000	0.000	0.000	0.000	
AB test order 2 (Pr > z =)	0.401	0.376	0.409	0.348	0.374		0.188	0.199	0.196	0.107	0.099	

* Significant at p<.1; ** p<.05; *** p<.01; standard error in parentheses; (1) - (5) Difference GMM; (5a) System GMM

Note: For the OECD Gini coefficient Belgium, Korea, Spain, and Switzerland are not included; for the OECD P90/P10 ratio Austria, Finland, Korea, Norway, and Spain are not included.

Table 4: Robberies: Detailed results for WIDER inequality measures

	Robberies (natural logs)											
	WIDER Gini coefficient						WIDER P90/P10 ratio					
	(1)	(2)	(3)	(4)	(5)	(5a)	(1)	(2)	(3)	(4)	(5)	(5a)
Robberies (lagged)	.907*** (0.000)	.904*** (0.000)	.927*** (0.000)	.909*** (0.000)	.921*** (0.000)	.931*** (0.000)	.915*** (0.000)	.912*** (0.000)	.934*** (0.000)	.909*** (0.000)	.914*** (0.000)	.933*** (0.000)
Income inequality (alternative measures)	.005** (0.013)	.004** (0.016)	.005*** (0.006)	.004** (0.018)	.004** (0.015)	.007** (0.024)	-.012** (0.015)	-.012** (0.015)	-.013** (0.017)	-.007 (0.140)	-.009* (0.088)	-.005 (0.389)
Tertiary education	.002*** (0.001)	.003*** (0.000)	.002*** (0.001)	.001* (0.067)	.001 (0.126)	-.000 (0.936)	.003*** (0.000)	.003*** (0.000)	.003*** (0.000)	.002** (0.010)	.002** (0.036)	.001 (0.680)
Decommodification		.007** (0.033)						.005 (0.148)				
Female employment			.001 (0.744)		.000 (0.816)	-.001 (0.683)			-.001 (0.622)		-.000 (0.805)	-.000 (0.809)
Divorce				.063*** (0.001)	.070*** (0.001)	.064*** (0.001)				.041** (0.043)	.047** (0.028)	.066*** (0.002)
Union density			.381*** (0.002)		.180 (0.136)	.239* (0.071)			.234 (0.153)		.004 (0.981)	.089 (0.418)
Public social expenditure				-.007** (0.010)	-.006** (0.021)	-.003 (0.514)				-.007*** (0.007)	-.006** (0.030)	-.004 (0.383)
Long-term unemployment			-.001 (0.470)		-.000 (0.448)	-.001 (0.450)			-.001* (0.054)		-.001 (0.208)	-.001 (0.181)
Imprisonment (lagged)				-.000*** (0.006)	-.000** (0.048)	-.000*** (0.004)				-.000** (0.032)	-.000* (0.080)	-.000** (0.021)
Men aged 15-29	.008** (0.013)	.008** (0.012)	.007* (0.086)	.008** (0.010)	.008** (0.022)	-.000 (0.970)	.003 (0.365)	.004 (0.325)	.002 (0.545)	.006* (0.058)	.007* (0.072)	-.002 (0.749)
GDP per capita	-.208** (0.032)	-.284*** (0.006)	-.179 (0.107)	-.290*** (0.004)	-.283*** (0.008)	-.101* (0.087)	-.400*** (0.000)	-.455*** (0.000)	-.428*** (0.001)	-.460*** (0.000)	-.483*** (0.000)	-.289** (0.019)
Number of observations	447	447	447	447	447	461	403	403	403	403	403	415
Number of countries	18	18	18	18	18	18	16	16	16	16	16	16
Sargan test (Pr > chi2 =)	0.001	0.002	0.007	1.000	1.000		0.263	0.310	0.441	1.000	1.000	
AB test order 1 (Pr > z =)	0.000	0.000	0.000	0.000	0.000		0.000	0.000	0.000	0.000	0.000	
AB test order 2 (Pr > z =)	0.496	0.446	0.483	0.346	0.328		0.544	0.508	0.527	0.434	0.425	

* Significant at p<.1; ** p<.05; *** p<.01; standard error in parentheses; (1) – (5) Difference GMM; (5a) System GMM

Note: For the WIDER Gini coefficient Korea and Spain are not included; for the WIDER P90/P10 ratio Japan, Korea, New Zealand, and Spain are not included.

Starting with the models for robberies that apply the “Difference GMM” and include the Gini coefficient as income inequality measure (either from OECD or WIDER databases) and men aged 15–29 as demographic control variable, we obtain significant results in line with expectations for the lagged dependent variable and both control variables. Of the two variables representing the first component of our anomie concept, one, namely tertiary education, is significant with the “right” sign in all model variants and modelling steps; the other, the Gini coefficient, yields significant positive results only when WIDER data is used. The decommodification index, introduced in the second modelling step, is generally positively signed in all model variants but reaches significance only in models using the WIDER Gini coefficient. According to that, the link between decommodification and robberies over time is not negative but positive. When we replace, in the third modelling step, the decommodification index by indicators that represent besides different integration strategies also different labour market policies (female employment, union density, long-term unemployment), only union density comes close to (see OECD Gini coefficient; Table 3) or reaches (see WIDER Gini coefficient; Table 4) significance, albeit with the “wrong” sign: The institutional effectiveness of “decommodifying” social democratic labour market policies with respect to integration and crime prevention is thus once more called into question. In the fourth modelling step, the three other, more general indicators of conservative, social democratic and liberal integration strategies (divorce rates, public social expenditure, imprisonment) are included instead and indeed perform quite well and according to assumptions. Although only one of them (imprisonment) reaches significance in the model variant with OECD Gini coefficient, all of them are significant when the WIDER Gini coefficient is used. Apart from labour market policies, the institutional effectiveness of the different integration strategies thus seems less questionable. The fifth modelling step—the full model including all institutional variables (except for the decommodification index)—largely confirms the aforementioned effects in the WIDER version, whereas results are, once more, less conclusive in the OECD version (where curiously female employment is now significant with the hypothesized sign).

In alternative regressions including unemployed men aged 15–24 (instead of men aged 15–29), the control variables do not always reach significance and perform somewhat differently when model variants based on OECD and WIDER Gini coefficients are compared. Apart from that, the results obtained for the explanatory variables in the aforementioned model specifications are largely replicated even when the demographic control variable is changed.

Turning to models for robberies that still employ the “Difference GMM” but now include the P90/P10 ratio as measure of “market” income inequality (again drawn from OECD as well as WIDER sources), the most striking finding is that, other than expected, a more balanced earnings distribution does not reduce but rather increase the incidence of crime. By changing the indicator, the causal link between income inequality and anomic crime thus seems to be reversed. Whereas in these models the demographic control variable is not always significant, the rest of the results generally confirm what has been stated above. The decommodification index (second modelling step) and the employment-related institutional indicators (third modelling step) do not corroborate the hypotheses underlying the different integration strategies. Instead, we once again find inconclusive as well as contradictory results, i.e. several variables (namely, the decommodification index, union density and long-term unemployment) are significant at least in some of the specifications but with the “wrong” sign. At the same time, the three other institutional indicators (fourth modelling step) yield results that are almost always significant and in line with expectations. Again, the findings for model variants including either men aged 15–29 or unemployed men aged 15–24 are structurally similar.

Comparing the results of “Difference GMM” estimations with “System GMM” estimations raises doubts about some of these findings but does not question the overall approach in interpreting the data. Referring only to the full model (fifth modelling step), it is clear that estimations based on the “System GMM” yield less significant results. Still, the lagged dependent variable, the divorce rate, the imprisonment rate and the control for GDP per capita are significant with the expected signs in all model specifications (or all but one). Regarding income inequality, there are both

significant positive results (WIDER Gini coefficient) and significant negative results (OECD P90/P10 ratio) as well as some inconclusive ones. As before, union density and long-term unemployment occasionally turn significant with the “wrong” signs. In contrast, this time tertiary education does not reach significance in the full model (but in earlier modelling steps) nor does public social expenditure (in any of the modelling steps). The latter finding has to be taken into account when assessing the institutional effectiveness of the social democratic integration strategy.

With respect to homicides, our model is supported by the Sargan test, but not by the second Arellano-Bond test, according to which there is evidence for serial correlation in the first-differenced errors at order two. As this means that the moment conditions used are not valid and that the model seems to be misspecified, we will not go into the details of these regressions. But if the preliminary results are of any use to the problem at hand, they challenge the assumption that the two crime indicators considered in this paper can be used interchangeably. As a matter of fact, robberies and homicides are substantially correlated only when cross-sectional variation is taken into account (0.44) whereas there is no significant correlation over time (0.10). This discrepancy seems to be reflected in quantitative and qualitative differences in the effects of at least some of the explanatory variables (e.g. the decommodification index and the imprisonment rate) when compared to the above findings. Still, all in all the results (as yet not reliable) hint at the same problems of employment-related integration strategies that were pointed out in the previous analysis.

7. Conclusions

The aim of this study was to map patterns of integration in societies at the transition from welfarism to post-welfarism. For this purpose, we built on theoretical and empirical approaches within the anomie paradigm that interlinks general and criminal sociology. In multiple regressions for a sample of twenty developed countries in the period 1970–2004, we focused on the robbery rate as indicator of the institutional effectiveness of different integration strategies (namely, conservative, social democratic and liberal).

Overall, our research design proved successful as we were able to demonstrate that individual inclusion and stratified exclusion on the one hand and different strategies of integration (represented by our institutional indicators) on the other hand interlink in regulating the incidence of crime. Furthermore, we had good reason not to conflate the effects of indicators representing different dimensions of the same strategy in indices but to group the indicators across strategies instead (see modelling steps three and four). That way, we were able to single out the problematic—and indeed somewhat counterintuitive—effects of employment-related policies (here interpreted as means of social integration) over time. We thus found evidence that familialist (low female employment), unionist (high union density) and liberalist (low long-term unemployment) employment strategies do not necessarily lower but occasionally increase anomic crime. At the same time, the “family” (low divorces), the “state” (high public social expenditure) and the “prison” (high imprisonment)—the latter interpreted as institutional counterpart of the “market”—do effectively contribute to crime prevention and social integration when other aspects of the respective strategies are taken into account.

The rather positive than negative effect of the decommodification index indicates that welfare regime classification matters, albeit not in the expected sense. The significant results obtained at least in some of our models would thus suggest that “commodification” and not “decommodification” induces lower crime levels over time in a given society. While the results summarized so far seem more or less coherent, a puzzle is left by the contradictory performance of the Gini coefficient (positive sign when using OECD data) and the P90/P10 ratio (negative sign both for OECD and WIDER data) as alternative measures of income inequality. To be sure, the former rather relates to a “pre-government” and the latter to a “post-government” income distribution. Still, we rather would have expected the opposite effects. To make sense of the results, we thus have to re-interpret the Gini coefficient as a measure of “decommodified” income distribution and the P90/P10 ratio as a measure of “commodified” income distribution. Through this lens, the “curious” results just replicate the findings for the decommodification index.

As the latter example shows, the link between theoretical assumptions and empirical operationalization—and therefore the interpretation of the findings—remains contingent and rather contentious in macrosociological studies like ours. Still, the exploration and assessment of a large number of empirical results yields important insights for understanding and theorizing upon contemporary societies. But to substantiate our assumption that there is a general shift towards more “liberal” regimes that build on incentive as well as punitive elements, further analyses will be necessary that also scrutinize the possible “artifacts” of different estimation methods and sample structures.

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Appendix

Table A1: Data description and sources

Variable	Description	Source
Robberies	Total recorded robberies, per 100,000 population	UN Surveys of Crime Trends
Homicides	Homicide and manslaughter, estimated total deaths per 100,000 population	WHO
OECD Gini coefficient	Gini coefficient for the distribution of household disposable income	OECD, Society at a Glance 2005
OECD p90p10 ratio	Ratio of earnings at the 90th percentile level to earnings at the 10th percentile level	OECD Labour Force/Earnings Statistics
WIDER Gini index	See definitions in WIID	UNU-WIDER database
WIDER p90p10 ratio	See definitions in WIID	UNU-WIDER database
Tertiary education	School enrolment, tertiary (in % gross)	WDI 1999 and 2007
Female employment	Share of women of working age (15 to 64 years) in employment	OECD Factbook 2007
Divorce	Crude divorce rate, number of divorces per 100,000 population	OECD, Society at a Glance 2006; for Canada: Statistics Canada; for Australia: Australian Bureau of Statistics
Union density	Union members divided by total employees, both from survey data; if no survey data available for union members administrative data were used	OECD Statistics
Public social expenditure	Public social expenditure as percentage of GDP	OECD, Society at a Glance 2005
Long-term unemployment	Persons unemployed for 12 months or more as a percentage of total unemployed	OECD Factbook 2007
Imprisonment	Prisoners per 100,000 people	OECD, Society at a Glance 2001 and 2006
Men aged 15-29	Male population aged between 15 and 29 years as a share of the total population	OECD Statistics
Unemployed men aged 15-24	Unemployment rate of young men aged between 15 and 24	OECD Statistics
GDP per capita	GDP per capita, purchasing power parity, constant US \$	WDI 2007
Decommodification index	Index based on welfare state characteristics (pensions, unemployment, sick leave)	Comparative Welfare Entitlements Dataset (provided by Lyle Scruggs; see www.sp.uconn.edu/~scruggs/wp.htm)

Table A2: Descriptive characteristics of the sample

	Mean	Standard deviation	Min.	Max.
Robberies	62.04	51.89	1.29	272.69
OECD Gini coefficient	27.51	4.21	17.70	36.14
Tertiary education	43.40	17.88	15.28	97.70
Female employment	55.60	11.76	27.20	81.00
Divorce rate	2.28	0.99	0.20	5.30
Union density	0.43	0.20	0.10	0.84
Public social expenditure	20.93	6.35	3.50	36.80
Long-term unemployment	27.95	17.58	1.10	78.50
Imprisonment	99.10	106.12	22.00	711.67
Men aged 15-29	33.91	4.07	24.36	45.18
GDP per capita	20118.57	6101.77	9955.07	38200.41
Decommodification index	26.80	5.96	14.90	43.10
OECD P90/P10 ratio	2.99	0.82	1.02	5.78
WIDER Gini coefficient	30.08	4.94	19.80	42.10
WIDER P90/P10 ratio	5.65	1.95	1.83	12.64

Note: As the descriptive statistics for the different models are largely redundant, we provide only the details for the model based on the OECD Gini coefficient and add rows for the alternative inequality measures we used (OECD P90/P10 ratio, WIDER Gini coefficient, WIDER P90/P10 ratio), which slightly changed the overall sample.

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Assessing the Relevance of Anomie Theory for Explaining Spatial Variation in Lethal Criminal Violence: An Aggregate-Level Analysis of Homicide within the United States

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Assessing the Relevance of Anomie Theory for Explaining Spatial Variation in Lethal Criminal Violence: An Aggregate-Level Analysis of Homicide within the United States

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One of the most influential statements in the anomie theory tradition has been Merton's argument that the volume of instrumental property crime should be higher where there is a greater imbalance between the degree of commitment to monetary success goals and the degree of commitment to legitimate means of pursuing such goals. Contemporary anomie theories stimulated by Merton's perspective, most notably Messner and Rosenfeld's institutional anomie theory, have expanded the scope conditions by emphasizing lethal criminal violence as an outcome to which anomie theory is highly relevant, and virtually all contemporary empirical studies have focused on applying the perspective to explaining spatial variation in homicide rates. In the present paper, we argue that current explications of Merton's theory and IAT have not adequately conveyed the relevance of the core features of the anomie perspective to lethal violence. We propose an expanded anomie model in which an unbalanced pecuniary value system – the core causal variable in Merton's theory and IAT – translates into higher levels of homicide primarily in indirect ways by increasing levels of firearm prevalence, drug market activity, and property crime, and by enhancing the degree to which these factors stimulate lethal outcomes. Using aggregate-level data collected during the mid-to-late 1970s for a sample of relatively large social aggregates within the U.S., we find a significant effect on homicide rates of an interaction term reflecting high levels of commitment to monetary success goals and low levels of commitment to legitimate means. Virtually all of this effect is accounted for by higher levels of property crime and drug market activity that occur in areas with an unbalanced pecuniary value system. Our analysis also reveals that property crime is more apt to lead to homicide under conditions of high levels of structural disadvantage. These and other findings underscore the potential value of elaborating the anomie perspective to explicitly account for lethal violence.

Robert Merton (1938) suggested several decades ago that rates of deviance, and especially levels of property crime, would be significantly higher in social collectivities in which the population has a relatively strong commitment to monetary success goals and a relatively weak commitment to legitimate means for pursuing such goals. He argued further that this result was more likely to occur where the social structure provided insufficient opportunities for members of the population to achieve valued monetary success goals through legitimate avenues (see also Merton 1949,

1957, 1964, 1968). These core arguments of Merton's classic anomie theory have been influential in stimulating and shaping subsequent theoretical contributions on crime and violence in the United States and elsewhere (e.g., Bernburg 2002; Cole 1975; Orru 1987). Most recently, Messner and Rosenfeld (1994, 2007) integrate many of the central causal elements of Merton's theory with insights from Parsons, Marx, and others in outlining an argument for spatial variation in serious violence that has become widely known as "Institutional Anomie Theory" (IAT). Messner and Rosen-

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feld's IAT shares with Merton's theory a core emphasis on the criminogenic tendencies of a relatively strong commitment to monetary success goals and a relatively weak commitment to legitimate means for pursuing monetary goals. But Messner and Rosenfeld's theory (2007) also extends Merton's perspective in several important respects, including a major elaboration on the sources of spatial variation in value commitments, a much more nuanced treatment of the range of social structural forces that may be relevant for regulating how people respond to cultural prescriptions, and a significant broadening of its scope conditions to encompass goal attainment "by any means necessary," including lethal criminal violence. The present study focuses on assessing the theoretical and empirical utility of the last of these recent expansions of anomie theory, or in other words on addressing the relevance of classic and contemporary anomie theories for explaining variation in levels of *homicide* across social collectivities.

Although Merton does not fully spell out limits to the scope conditions of his anomie theory, he emphasizes money generating property crime as a key innovative response to the pecuniary cultural and structural imbalances upon which he focuses and, as far as we can tell, he is notably silent on lethal violence in his writings on anomie. In contrast, Messner and Rosenfeld (1994, 2007) explicitly state that the proper scope conditions for IAT are serious criminal activities, and they include homicide as a prominent example of the kind of outcome relevant to their explanation. Moreover, virtually all of the existing empirical studies with stated ties to IAT incorporate homicide rates as an outcome variable; most studies do so exclusively, omitting other serious crimes such as robbery, burglary, auto theft, or the distribution of illicit drugs, which on their face seem more directly relevant to the core theoretical arguments of classic and contemporary anomie theories (for a review of IAT empirical tests, see Messner and Rosenfeld 2006; Pratt and Cullen 2005). This is surprising at a conceptual level given that the internal logic of Merton's anomie theory and Messner and Rosenfeld's IAT point easily to predictions of spatial variation in instrumental crimes that will facilitate the acquisition of money (Chamlin and Cochran 1995). Moreover, in our view these theories do not clearly specify why members of a population would resort to *lethal*

violence to achieve such objectives aside from the relatively infrequent instances in which property crimes go wrong and end in death (see also Beeghley 2003). While it could be argued that homicide is a particularly expedient way to achieve a desired end, it appears that homicide is typically committed for reasons other than enhancing one's financial circumstances and it is rarely a repeated behavior regardless of the motivation (e.g., Maume and Lee 2003; Reidel and Walsh 2008; Savolainen, Messner, and Kivivuori 2000). This does not necessarily invalidate anomie theory as a potential explanation of spatial variation in homicide, but it does suggest that the direct effect of anomic social conditions on homicide presumed in much of the extant theoretical and empirical literature might be modest at best and, more generally, it points our attention to a consideration of possible intervening causal mechanisms that might explain why social collectivities with a strong commitment to monetary success goals and a relatively weak commitment to legitimate means for pursuing monetary success goals might exhibit higher homicide rates.

As we elaborate below, we see several plausible ways in which the social conditions emphasized in classic and contemporary anomie theories might yield higher levels of lethal criminal violence, but in our view the relevant mechanisms for describing these linkages have not been clearly articulated in previous theoretical explications or tested in existing empirical research. In this paper we propose a slightly expanded anomie perspective that explicitly links anomic social conditions to lethal criminal violence. Our model highlights the possibility that the combination of a strong commitment to monetary success and a weak commitment to legitimate means of pursuing monetary success (what we refer to as an "unbalanced pecuniary value system" or "unbalanced pecuniary value commitments") give rise to higher levels of gun prevalence, higher levels of illicit drug market activity, and higher levels of instrumental property crime (e.g., robbery, burglary, auto theft, and larceny), which in turn translate into higher levels of homicide for reasons elaborated below. Given that a modest percentage of homicides occur in the context of illicit activities designed to yield monetary gain, we also expect and test for a direct effect on overall homicide rates of a combined strong commitment to monetary success and weak com-

mitment to legitimate means of pursuing monetary success. Further, drawing from Merton (1938) and Messner and Rosenfeld (2007) we anticipate that any observed direct effects of this type of unbalanced pecuniary value system on homicide or the proposed mediators (gun prevalence, illicit drug activity, and property crime) will be conditioned by certain aspects of the social structure. Finally, we hypothesize that the effects of gun prevalence, illicit drug market activity, and property crime on homicide will be amplified where this unbalanced value system is prevalent among members of the population.

We begin by outlining the basic theoretical model implied in classic and contemporary anomie theories. We then present an expanded model geared toward more explicitly clarifying the ways in which the core social arrangements emphasized in anomie theory might translate into high levels of lethal criminal violence. We derive several hypotheses from this modified anomie model of *lethal* violence, and then test these hypotheses with aggregate cross-sectional data from the United States that combines survey data from the American 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 U.S. sources on several other features of social aggregates, including levels of firearm prevalence, illicit drug market activity, property crime, and homicide. We close with a discussion of the implications of our study for classic and contemporary anomie theories and for existing research on spatial variation in lethal violence both within and across nations.

1. Theory and Hypotheses

1.1. Anomie Theory and Instrumental Property Crime

Baumer and Gustafson (2007) recently specified a theoretical model that integrates some of the central arguments

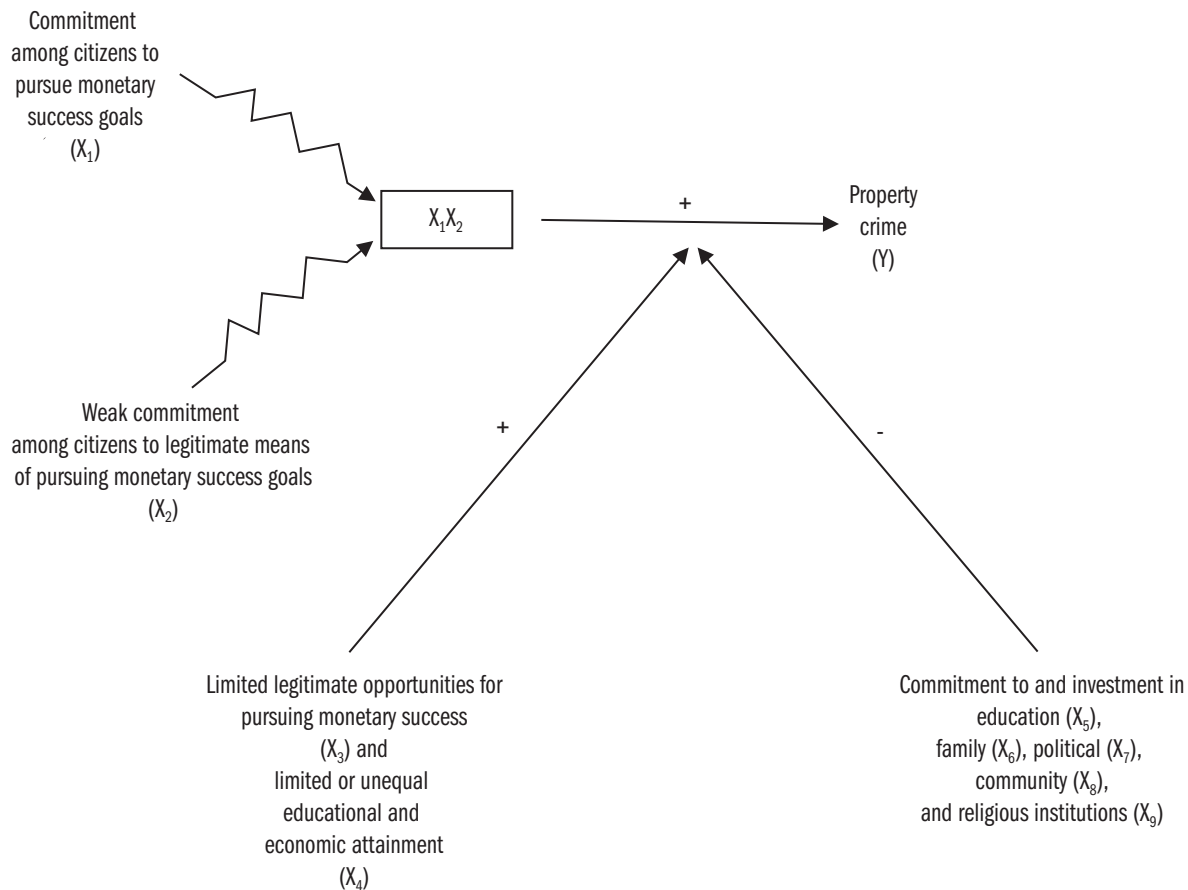
found in Merton's classic anomie perspective and in Messner and Rosenfeld's contemporary Institutional Anomie Theory (IAT). They interpret these anomie theories as specifying cultural and structural influences that affect levels of crime mainly by shaping value commitments of members of a population. Specifically, in their representation of the two theories, greater exposure to a distinctive type of cultural structure (a strong cultural emphasis on monetary success and a weak cultural emphasis on legitimate or institutionalized means of pursuing monetary success) yields—through a process of socialization—a larger percentage of persons in a given population who have a particular type of value complex: a strong commitment to pursuing monetary success goals and a weak commitment to doing so through legitimate means. Social collectivities with a higher prevalence of persons who identify with this “unbalanced pecuniary value system” will likely exhibit higher levels of instrumental property crime because such behavior emerges as one of the expedient means by which to facilitate the attainment of culturally valued goals (619–22). Thus, as shown in Figure 1, Baumer and Gustafson (2007) suggest that as outlined in classic and contemporary anomie perspectives, differences across social collectivities in instrumental property crime are primarily a function of differences in the percentage of community members who are strongly committed to pursuing monetary success goals and who are weakly committed to pursuing monetary goals through legitimate means.¹ Drawing from Merton, Baumer and Gustafson note further that the link between this value complex about the prescriptions and proscriptions of pursuing monetary success goals may be amplified in contexts of limited access to legitimate opportunities and low levels of achievement and, borrowing from Messner and Rosenfeld (1994, 2007), they suggest that they may be dampened in contexts of high levels of commitment to non-economic social institutions (622–27).²

¹ See Baumer (2007) for an extended discussion of the internal logic implied in Merton's theory for linking cultural and structural conditions to deviant behavior.

² To accommodate the three-way statistical interactions implied in the anomie theories of Merton and Messner and Rosenfeld, Baumer and Gustafson (2007) use saw-toothed arrows to represent the key two-way interaction (i.e., the interaction between commitment to monetary success goals and commitment to legitimate means) as a distinct variable, designated in Figure 1 as X_1X_2 (see also 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), the more common approach of drawing an arrow from the specified moderator to the causal path that represents the two-way interaction effect is used.

Figure 1: Baumer and Gustafson's integrated anomie model of property crime



Although several empirical studies have examined hypotheses relevant to Merton's theory and IAT, the core linkages implied in these theories have rarely been examined (see also Messner and Rosenfeld 2006). For example, in a pioneering empirical test of Institutional Anomie Theory, Chamlin and Cochran (1995) examined the effect of poverty on property crime rates, and the extent to which that effect is conditioned by the strength of non-economic institutions. Though it might be argued that poverty is a rough proxy for the desire for material gain coupled with blocked opportunities, we still know little about whether instrumental property crime rates are greater in social collectivities with a high level of commitment to monetary success goals coupled with a weak level of commitment to using legitimate means to pursue monetary success goals, a key construct of both versions of anomie theory. Also, little is

known about whether an insufficient supply of legitimate educational and economic opportunities and a high degree of involvement in non-economic social institutions serve to moderate the effect of this largely unmeasured unbalanced value complex.

Baumer and Gustafson (2007) address these issues in a preliminary way with a cross-sectional analysis of data from U.S. counties and metropolitan areas that yielded mixed findings on the empirical validity of the integrated anomie model shown in Figure 1. Their findings suggest that instrumental property crimes tend to be highest in areas in which members of the population express both a strong commitment to pursuing monetary success goals and a weak commitment to legitimate means for doing so. Further, although they do not find that the criminogenic

tendencies of this unbalanced pecuniary value system are enhanced by low levels of access to legitimate economic and educational opportunities or low levels of achievement, as suggested by Merton, the results support Messner and Rosenfeld's contention that such tendencies are dampened in the context of high levels of welfare support and contact between family members.

Perhaps the most notable finding that emerged from Baumer and Gustafson's study is that the fundamental argument of classic and contemporary anomie theories – that rates of instrumental crime are highest in places with a relatively strong commitment to monetary success and weak commitment to legitimate means – has empirical merit. Their study also leaves some important questions unaddressed, however. One thing that remains to be seen, for example, is whether the central predictions of these anomie perspectives (i.e., the main and interactive effects of an unbalanced pecuniary value system) also are relevant to explaining spatial variation in *lethal criminal violence*. In our view, this is more than merely an empirical exercise in determining whether similar results would emerge if homicide rates were swapped out with instrumental *property* crime. It raises first a basic theoretical question, often taken for granted, of whether classic and contemporary anomie theories yield clear predictions for geographic differences in levels of homicide. Stated more directly, while the expectation of higher instrumental crime rates flows quite logically from the causal structure of classic and contemporary anomie theories, do their scope conditions encompass lethal criminal violence, or in other words do they also support the prediction that a strong commitment to monetary success goals coupled with a weakened commitment to legitimate means would yield higher levels of *homicide*? If so, what are the mechanisms that link an unbalanced pecuniary value system to lethal criminal violence? These are the questions to which we now turn.

1.2. Anomie Theory and Lethal Criminal Violence

In his discussion of “modes of adaptation,” Merton (1938, 1968) mentions several possible behavioral responses that might flow from a high level of commitment to monetary success goals and a weakened commitment to legitimate means. To our knowledge, however, he does not include

homicide as a likely response. In contrast, Messner and Rosenfeld (1994, 2007) explicitly outline the scope conditions relevant to their theory, stating that it encompasses serious crimes, which they define as “violations of criminal law involving significant bodily injury, the threat of bodily injury, or, in the case of nonviolent offenses, significant economic harm to victims” (2007, 47). The range of crimes covered by Messner and Rosenfeld's definition of serious crimes is broad, including both “street crimes” and “suite crimes,” but in various places they emphasize robbery and homicide as prominent examples of the types of serious crimes to which their perspective is likely most relevant (e.g., 2007, 19–22, 47–49).

Perhaps stimulated in part by Messner and Rosenfeld's explicit statement of scope conditions, several studies during the past decade or so that examine empirical predictions relevant to anomie theory, and in particular IAT, have focused on the explanation of overall homicide rates (Maume and Lee 2003; Messner and Rosenfeld 1997; Piquero and Piquero 1998; Pratt and Godsey 2003; Pridemore 2008; Savolainen 2000; Stucky 2003; for reviews, see Messner and Rosenfeld 2006; Pratt and Cullen 2005). The vast majority of these studies have examined whether the effects on homicide rates of absolute or relative economic disadvantage are moderated by factors such as welfare support, political participation, church membership, and family stability. These studies have advanced our understanding of spatial variation in homicide rates, and many have revealed support for the idea that high levels of commitment to non-economic social institutions or other buffers to free-market economies (e.g., the decommodification of labor) can dampen criminogenic influences of high rates of poverty and inequality. The extant research on anomie and homicide has not addressed, however, an arguably more central explanatory question of relevance to classic and contemporary anomie theories: are homicide rates higher in social collectivities in which a larger fraction of the population is strongly committed to monetary success goals and weakly committed to legitimate means for pursuing monetary goals?

Some scholars have questioned the relevance of anomie theory (however operationalized) for explaining differences in lethal criminal violence across social collectivities (Agnew

1999; Beeghley 2003; Felson forthcoming; Pare and Felson 2007). Although this theme has not been developed extensively in the literature, in essence the critics suggest that classic and contemporary anomie perspectives do not encompass a proximate theory or explanation of how people might become motivated to use violence, something they see as essential to explaining why the criminogenic “pressures” that emanate from a social context in which there is a high level of emphasis on pursuing monetary success and a low level of emphasis on using legitimate means to do so would lead to lethal outcomes. One of the proposed extensions to the anomie perspective that emerges from extant literature is to integrate elements of the general frustration/aggression violence perspective. For example, Agnew (1999) suggests that a significant portion of the observed variation in levels of violence across social collectivities, including lethal violence, is due to variation in levels of frustration, anger, and other states of negative affect.

The issue of whether “frustration” is central or even relevant to the basic anomie argument under examination here has been the subject of heated debate (cf., Agnew 1987; Bernard 1987). Our position on the matter is that it is plausible to suggest that the combination of a strong degree of commitment to monetary success and weak commitment to legitimate means, the key process emphasized in the anomie theories of Merton and of Messner and Rosenfeld, could give rise to high levels of frustration or anger, especially when accompanied by relatively low levels of access to legitimate (and realistic) means for achieving monetary success or few buffers from competitive market conditions. And higher levels of frustration or anger in an area may yield higher levels of violence (Agnew 1999). Nevertheless, this modification fundamentally alters the anomie theoretical framework, de-emphasizes the key concepts and, in our view, is not necessary for illuminating the relevance of classic and contemporary anomie theories for explaining cross-sectional differences in levels of lethal criminal violence (see also Bernard 1987). Indeed, a distinctive feature of Merton’s anomie theory and IAT is that they describe both the forces that might provide the impetus or motivation for deviance and also the forces that might regulate such motivation (see also Messner and Rosenfeld 1994). Given this, we do not see the need to elaborate the anomie theoretical model with an

additional “motivational” component (e.g., a frustration-aggression argument) to explain variation in levels of lethal violence. But we do find merit in the critique that, while anomie perspectives provide a logical explanation for why certain socially structured pressures related to economic goal attainment would yield higher levels of crimes whose intended purpose is to enhance one’s financial circumstances, they do not adequately explain how those pressures would translate into higher levels of lethal criminal violence, except of course for the modest proportion of cases in which money-generating crime turns deadly.

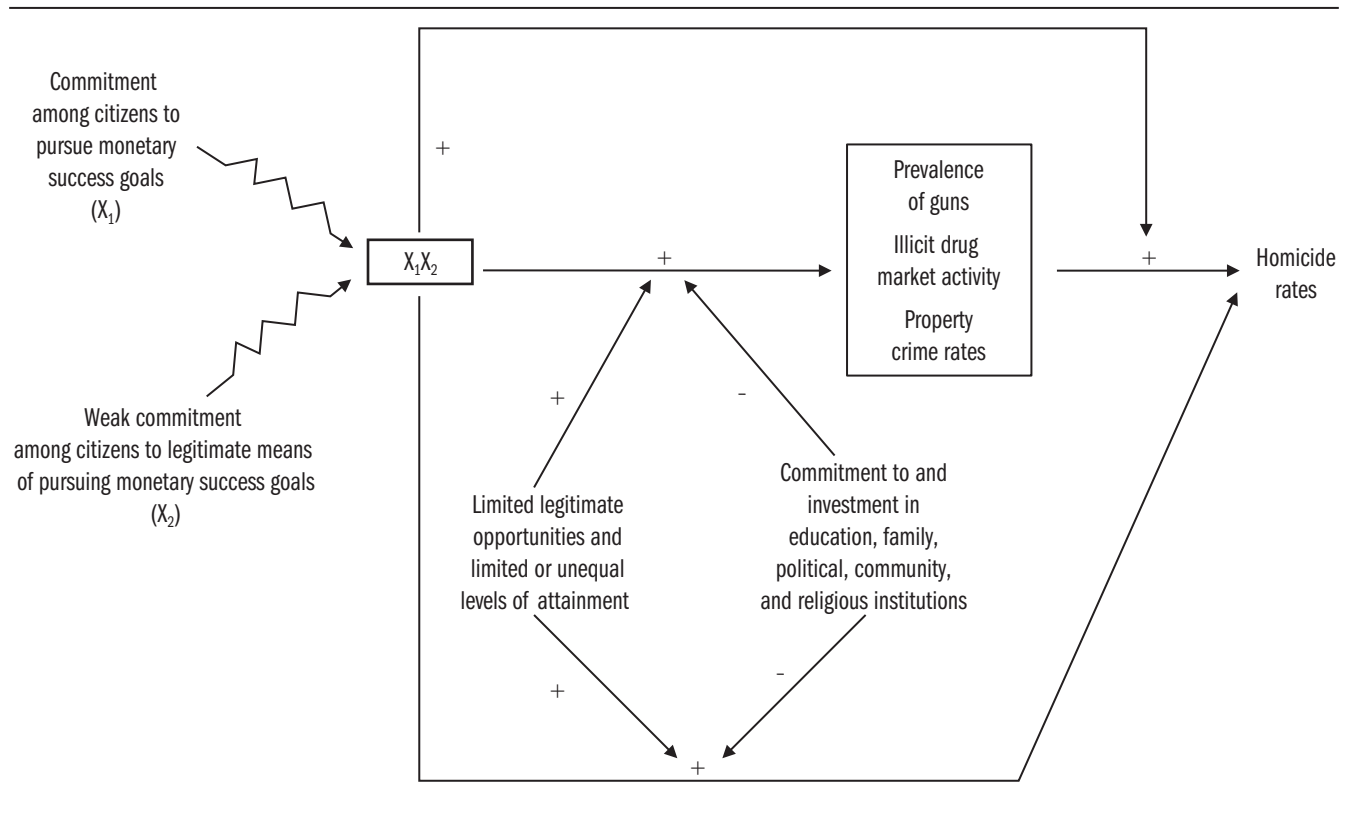
In another critique of the relevance of anomie theory for explaining variation in levels of lethal violence, Beeghley (2003) argues that key factors identified in prior research as sources of variation in homicide rates are ignored or dismissed as unimportant. He contends that although anomie perspectives are useful and highly relevant for understanding the nature of American society, these theories cannot explain the unusually high rate of homicide in the United States since they do not account for other highly correlated structural characteristics such as the widespread availability of guns and the rapid expansion of drug markets. While recognizing the potential of anomie perspectives to explain variation in economically motivated crimes, Beeghley argues that “crime and homicide ought to be considered as separate problems” because “the high rate of lethal violence in the United States has more specific structural sources than the anomic character of American Society” (p.95).

We concur with Beeghley (2003) on the value of questioning the ability of classic and contemporary anomie theories to explain variation in any form of crime other than those with a purpose of economic gain, and particularly homicide since it is emphasized in much of the theoretical and empirical literature. There are extensive, long-standing literatures detailing the connection between numerous macro-social characteristics and homicide rates that should be recognized in any fully specified theoretical account of aggregate patterns in lethal violence. Outlining the full details of such a theory is not the main purpose of Messner and Rosenfeld’s anomie theory (2007), but it is noteworthy that recent statements of the theory have attended more directly to the potential importance of guns and illicit drugs

in generating high levels of lethal violence. In fact, Messner and Rosenfeld (2006) emphasize not only the importance of examining the proximate effect of the availability of guns and the prevalence of illicit drug use and drug market activity on homicide rates, but also the importance of explaining why there is such a high level of variability across social collectivities in the prevalence of gun, drug use, and drug market activity. They do not fully develop such an explanation in their writing on IAT, but as we explain next, the core anomie theoretical argument is potentially useful in this regard and, consequently, by elaborating the anomie argument in a simple and straightforward manner it is possible

to broaden the scope of the perspective to include not only economically motivated forms of property crime, but also both instrumental and expressive forms of lethal violence. We illustrate in Figure 2 an elaborated anomie theoretical model that integrates some well-known covariates of lethal criminal violence (gun prevalence, illicit drug use, and property crime) and summarizes how they might link the central causal element of classic and contemporary anomie perspectives – unbalanced pecuniary value commitments – to spatial variation in homicide. We describe this elaborated model in more detail below while also specifying the empirical predictions that we examine in our analyses.

Figure 2: Modified integrated anomie model of lethal criminal violence.



1.3. Indirect Effects of Unbalanced Pecuniary Values on Lethal Violence

The original formulations of current and classic versions of anomie theory do not clearly explicate the ways in which anomic conditions can be linked with variation in levels of lethal violence. One possibility is that unbalanced pecuniary value commitments can influence homicide rates indirectly through their effects on some of the structural characteristics that have been the focus of previous homicide research. Two such factors are the availability of guns and illicit drug market activity, both of which have been the subject of extensive, albeit sometimes contentious, discussion in the criminological literature. A third potential mediating factor is property crime itself. As we have already described, anomie theories clearly include in their scope conditions the ability to explain variation in levels of economically motivated crime. If a link can be drawn between rates of property crime and homicide, there is potential for anomie to explain the latter through its influence on the former. We now discuss the potential effect of an unbalanced pecuniary value system on each of these three factors, and their subsequent influence on homicide rates.

Data from the early 1980s through the 1990s show that the dramatic increase and subsequent decrease in homicide rates in the United States was almost entirely precipitated by changes in gun-related homicide (Blumstein and Wallman 2006). The strong correlation between gun prevalence and rates of lethal violence led Blumstein, Rivara, and Rosenfeld (2000) to argue that “the role of weapons must figure centrally in any credible explanation of U.S. homicide trends over the past 2 decades” (510), and Zimring and Hawkins (1997) state that guns are “so prominently associated with the high death rate from violence that starting from any other topic would rightly be characterized as an intentional evasion” (106). Yet, there is intense debate about the causal meaning and direction of the guns-homicide connection, with some even arguing that the apparent relationship between them is simply a coincidence (Kates and Polsby 2000; Kleck 1991). In response, Zimring and Hawkins (1997) recognize that gun availability is neither a necessary nor sufficient explanation of high rates of homicide, but they consider gun prevalence to be a contributing cause that, in combination with the willingness to use maximum force, is the most important contribution to high rates of violence.

But what might explain this willingness to use guns for lethal violence, and how does this relate to classic and contemporary anomie theories? Messner and Rosenfeld (2006) note that gun availability may be an important factor in explaining variation in homicide rates, but that such explanations are typically incomplete because they “fail to consider why firearms are so abundant and so often used in violent confrontations” (19). We propose that anomie theory may be useful for explaining both levels of gun prevalence and the extent to which this translates into high rates of lethal violence. One of the hallmarks of the anomie perspective is that when strong commitments to monetary success are paired with weak commitments to using legitimate means, innovative and technically expedient means to achieving success goals are more likely to be used. Given that possessing and being prepared to use a firearm is a particularly efficient means for obtaining desired goods, solving disputes, and generally imposing one’s will, it is plausible that such a value system could lead to higher rates of gun ownership. This logic, along with research linking gun prevalence and homicide (Cohen, Gorr, and Singh 2002; Rosenfeld, Baumer, and Messner 2007), suggests an indirect path whereby anomic conditions influence both instrumental and expressive forms of homicide through their influence on gun availability. More specifically, we expect the prevalence of guns will at least partially mediate the positive effect of unbalanced pecuniary value commitments on rates of lethal violence.

Another way in which contemporary and classic anomie theories might explain variation in rates of lethal violence is through the increase in illicit drug use and market activity that an unbalanced pecuniary value system may engender. Literature on the link between illicit drug markets and lethal violence in the United States is extensive, with much of it highlighting the similar longitudinal trends exhibited by levels of drug market activity and homicide in the 1980s and 1990s (Blumstein 1995; Blumstein, Rivara, and Rosenfeld 2000; Blumstein and Wallman 2006; Cork 1999). After reaching a peak in 1980, the U.S. homicide rate declined for the next five years, and then began edging upward again, predominantly driven by dramatic increases in the homicide offense rate among juveniles (Blumstein 1995). Many researchers attribute this trend to the arrival, and subse-

quent rapid expansion, of crack cocaine in U.S. cities during this same period, and the disproportionate level of involvement of juveniles in the drug trade (Baumer 1994; Baumer, et al. 1998; Blumstein 1995; Cork 1999; Ousey and Lee 2007).

The most common explanation of the connection between drugs and crime comes from Goldstein's "tri-partite" conceptualization (1985; 1989) which suggests three ways in which drugs and violence may be related. First, the pharmacological effect of ingesting an illicit substance may cause mood changes that lead to violent behavior or violent victimization. Second, drug users may engage in economically motivated violence to support their habit. Third, violence is often a regular means of doing business in the illicit drug trade, including the violent enforcement of norms within drug networks, solving disputes over territory, retaliation among drug dealers, killings resulting from disagreements during drug sales, and punishment for failing to pay debts. Lethal violence as "self-help" is deemed necessary in the absence of legal mechanisms for solving disputes and the lack of property rights enjoyed by those in legal markets (Black 1983; Grogger 2005). Other work suggests a fourth component of the drugs-crime connection whereby this systemic readiness to engage in violence can diffuse into areas outside of the direct domain of drug markets, such as when the norms and behavior that dominate the drug industry influence the behavior of individuals within the broader community who are not directly involved with the drug trade (Anderson 1999; Blumstein 1995).

The evidence for a link between the prevalence of illicit drug activity and homicide rates is strong, but how might this connection be related to, and perhaps explained by, anomie theory? We believe the preceding discussion implies several ways in which unbalanced pecuniary value commitments may indirectly affect levels of lethal violence by influencing drug use and market activity, and may also condition the effect of drug use and market activity on homicide rates. With regard to drug use, Merton (1938) suggested that retreating into drug use and addiction is one way in which individuals may adapt to the strain that stems from a discrepancy between their commitment to the pursuit of monetary success and the availability of and commitment to using legitimate means. To the extent that

drug use relates to violence, either pharmacologically or stemming from economic need, rates of drug use may serve as a potential link between anomic conditions and rates of homicide. Likewise, this unbalanced set of value commitments can lead to increased rates of participation in drug markets as individuals seek ways to pursue monetary success goals using any available means. Indeed, ethnographic research has illustrated the similarities between the drug trade and legitimate paths to success, with some researchers highlighting a common strategy of moving back and forth between legal and illegal work, whichever is most available and profitable (Adler 1995; Bourgois 2003; Freeman 1996). When combined with the literature linking drugs and violence, this leads us to the expectation that levels of drug use and drug market activity will at least partially mediate the positive effect of unbalanced pecuniary value commitments on rates of lethal violence.

A final intervening link that we propose as an explanation of the relationship between anomie and lethal violence is property crime. Though prior literature is less precise in explicating the link between rates of property crime and homicide, there are several reasons to believe that the two may be conceptually distinct and causally related (Katz 1988; see also Rosenfeld 2008).

One way in which property crime might yield higher levels of lethal violence is by channeling guns into the hands of participants of street culture and illegal markets. Ethnographic research on burglary reveals that guns are a prized commodity and are often sought out during break-ins (Wright and Decker 1994). Although the available data are imperfect, it is believed that several hundred thousand guns are stolen each year in the United States, and that a non-trivial proportion of the guns used during the commission of crimes were either stolen by their users or obtained from sources that likely acquired the guns through a theft of some sort (Sheley and Wright 1993; Zawitz 1995). And, as noted above, although the evidence is mixed a higher prevalence of guns in local areas has been linked to higher homicide rates (e.g., Cohen et al. 2002; Rosenfeld et al. 2007).

Prior research also has found that the victims of crime are often criminal offenders themselves (Hindelang, Got-

tfredson, and Garofalo 1978; Lauritsen, Sampson, and Laub 1991). Some suggest that this is due to risky lifestyles that increase the likelihood of both offending and victimization (Baron 1997; Dobrin 2001; Gottfredson 1981), but victimization of criminal offenders may also occur during transactions within the broader criminal market, such as between burglars and fences. Participants in these markets obviously do not enjoy the same legal protection of their property rights as participants in legal markets, and in the absence of such formal recourse for solving disputes, violence becomes more likely as a means of social control (Black 1983; Goldstein 1985; Grogger 2005). Where property crime is prevalent, such illegal markets are likely to emerge and expand, thus increasing the potential for lethal violence as a response to property crime victimization.

Finally, as discussed earlier with regard to illicit drug markets, the reliance on violence or the threat of violence as a means of social control and conflict resolution can diffuse beyond criminal markets and emerge as a prevailing norm in the broader community. Indeed, some have found that areas characterized by high levels of crime, isolation, and disadvantage are likely to have high rates of violence and incidents of retaliatory homicide as residents increasingly rely on informal methods of control (Anderson 1999; Jacobs and Wright 2006; Kubrin and Weitzer 2003). In his ethnographic study of an inner-city Philadelphia ghetto, Anderson (1999) found that the approval of and willingness to engage in violence that dominated the street culture had become the predominant view even among “decent” families that otherwise subscribed to typical middle-class values and norms. In these contexts, violence, and even lethal violence, can be seen as an appropriate response to the personal affront of property crime victimization (Jacobs and Wright 2006). Taken together, these arguments and prior research lead to the expectation that areas characterized by high rates of property crime are likely to also have high rates of lethal violence.

The theoretical connection between anomie and property crime is well established (Merton 1938; Messner and Rosenfeld 2007) and empirical research has been supportive (Baumer and Gustafson 2007; Chamlin and Cochran 1995). The expectation is that areas where the population

is strongly committed to the pursuit of economic goals and weakly committed to using legitimate means will tend to have higher rates of economically motivated crime. If property crime is, in turn, related to levels of lethal violence as suggested above, then we would expect that the property crime rate will at least partially mediate the positive effect of unbalanced value commitments on homicide rates.

1.4. Direct Effect of Unbalanced Pecuniary Values on Lethal Violence

So far we have outlined several ways in which anomie theory might explain variation in homicide rates. Social collectivities predominantly characterized by strong commitments to monetary goals but weak commitments to legitimate means are likely to have a greater prevalence of guns, active drug markets, and higher rates of property crime, all of which may be associated with increased levels of lethal violence. In addition to having these distal effects on homicide, as we illustrate in Figure 2 our review of the theoretical literature also suggests that anomic social conditions can have a more proximate effect. It is clear that both classic and contemporary anomie theories expect that an unbalanced pecuniary value system will lead directly to increased levels of instrumental crime. This suggests the possibility of a direct effect of anomic conditions on levels of lethal violence since some homicides are instrumental in nature, given that their primary purpose is “not to hurt the other person, but to gain something else from the violence, such as money or property” (Block, et al. 2000, 94). This type of homicide falls squarely within the scope conditions of anomie theories. From Merton’s perspective, this form of lethal violence represents the most perversely innovative response to pressures for economic success when legitimate means are not equally emphasized. From Messner and Rosenfeld’s perspective, lethal violence can be viewed as a powerful, expedient, and universally available means for monetary gain, which is culturally prescribed as the very definition of success and self-worth. Therefore, where value commitments are unbalanced, lethal violence is more likely to be used as a direct means for achieving material goals.

Estimates vary regarding the proportion of all homicides committed with the goal of material gain, largely due to the difficulties inherent in classification and measurement. Though not a direct measure of the instrumental nature of

homicide, Savolainen et al. (2000) find that about 22 percent of U.S. homicides occur during the commission of another crime, meaning more than three-fourths were committed with murder as the sole intent. Unfortunately, the largest category of homicides in this study consisted of those for which the circumstance was unknown, and of particular importance for the current study, there was no indication of whether or not the crime that led to homicide was, in fact, instrumental in nature. Using the same data source, but for different years and with the explicit purpose of identifying instrumental and expressive homicides, Meithe and Drass (1999) found similar numbers with only about 20 percent of homicides classified as instrumental. By comparison, Maume and Lee (2003) found in their sample of 454 counties that, on average, instrumental homicides constitute a little over one-third of all homicides. Using data from the St. Louis Police Department for the period 1985–89, Decker (1993) found that 47 percent of homicides were instrumental in nature. Thus, despite considerable variation across these studies, one consistent finding is that instrumental homicides, though not the modal type, represent a non-trivial proportion of all homicides. This leads us to the expectation that even after controlling for mediating factors, unbalanced pecuniary value commitments will have a direct positive effect on rates of lethal violence.

1.5. Social Structural Moderation of Unbalanced Pecuniary Values

Our discussion to this point about possible direct and indirect effects of an unbalanced pecuniary value system on homicide rates has purposely overlooked an important feature of the classic and contemporary anomie perspectives under review: the implied *conditional* effects on deviance of unbalanced pecuniary value commitments. Specifically, as we illustrate in Figure 2, Merton (1938) argued that the supply and distribution of legitimate opportunities and realization of economic achievement shapes the likely responses of a population when there is a high level of commitment to pursuing monetary success goals and a low level of commitment to legitimate means. According to Merton, when individuals confront obstacles to satisfying monetary success goals through legitimate means, or perceive that the supply of legitimate opportunities is inadequate or unevenly distributed, the likelihood of using illegitimate means will increase. Empirically, we interpret Merton's argument (1938,

1968) as implying that the tendency for unbalanced pecuniary values to translate into higher levels of property crime, illicit drug market activity, firearm prevalence, and homicide will be amplified under conditions of limited access to legitimate means for pursuing monetary success goals and low levels of economic attainment (see also Baumer and Gustafson 2007). This represents possible three-way interactions between commitment to monetary success goals, commitment to legitimate means, and indicators of access to legitimate opportunities and absolute and relative levels of economic achievement.

Using similar logic, but incorporating a broader view of the social structure, Messner and Rosenfeld (2007) highlight the potential importance of several key social institutions in regulating the criminogenic tendencies of an unbalanced pecuniary value system. They emphasize the relative strength of economic, political, educational, and familial institutions in the United States and suggest that a greater level of investment or participation in key non-economic social institutions will temper the ways in which people pursue monetary success goals in a context of weakened levels of commitment to legitimate means. More specifically, Messner and Rosenfeld argue that where non-economic social institutions are stronger there is likely to be greater exposure to external social controls and social supports, as well as a healthier dose of anti-deviant/pro-legitimate socialization with respect to proscriptions for pursuing monetary success goals. Empirically, this suggests that the tendency for unbalanced pecuniary values to translate into higher levels of property crime, illicit drug market activity, firearm prevalence, and homicide will be mitigated where there is greater participation and investment in non-economic social institutions that work to counter such an imbalance. These arguments imply three-way statistical interactions between commitment to monetary success goals, commitment to legitimate means, and indicators of non-economic social institutional strength.

1.6. Unbalanced Pecuniary Values and the Amplification of Lethal Violence

Although classic and contemporary anomie theories, at least as articulated by Merton and Messner and Rosenfeld, highlight the possibility that the effect of an unbalanced

pecuniary value system on crime might be conditioned by social structure, we think it is also plausible that the presence of such an imbalance itself might condition other causal factors, namely by amplifying the extent to which the prevalence of firearms, illicit drug market activity, and property crime yield high levels of lethal violence.

As noted above, available firearms serve as expedient and innovative, albeit illegal, aids in pursuing pecuniary goals. However, the wide availability of guns does not necessarily translate into higher levels of homicide; people must also be willing to use those guns for lethal violence. We contend that the elevated willingness to use any means necessary that is expected in a context characterized by unbalanced pecuniary value commitments would increase not only the prevalence of guns in that context as discussed above, but also the likelihood that the prevalence of guns will translate into higher levels of lethal violence. This suggests that, in addition to having an indirect effect on homicide rates, an unbalanced pecuniary value system may also condition the relationship between gun prevalence and rates of lethal violence. Empirically, we expect that the positive effect of gun prevalence on homicide rates will be larger in areas where the population has a strong commitment to pursuing monetary success goals and a weak commitment to legitimate means for doing so.

We also explained above how the unbalanced value system emphasized in anomie theory can increase homicide rates indirectly through its effect on illicit drug activity. But, in a similar way to our arguments concerning gun prevalence, it is possible that this value complex will also increase the likelihood that drug use and participation in the drug market will lead to lethal outcomes. The prevailing willingness to use any means necessary in the pursuit of monetary goals that emerges under anomie conditions is likely to increase the willingness to use lethal force in the pursuit of drugs, in drug transactions, and in the regular daily business surrounding the drug market. Cross-national comparisons are telling in this regard. Nearly all Western industrialized nations outlaw the same set of substances as the United States, and they have also experienced increases in rates of drug use and the emergence and proliferation of illicit drug markets (Ruggiero and South 1995; United Nations 2007).

Yet, there is little indication of a linkage between illicit drug markets and lethal violence in these countries (Zimring and Hawkins 1997). One explanation of the unusually lethal nature of the drug trade in the United States is the exaggerated anomic cultural orientation that is also unique to that country (Messner and Rosenfeld 2007). This suggests to us that across the counties and metropolitan areas in our sample, where the population has a strong commitment to monetary success goals and a weak commitment to legitimate means, the positive effect of drug use and drug market activity on lethal violence will be greater.

As with gun prevalence and drug markets, we also expect that the effect of property crime rates on homicide rates will be conditioned by the imbalance between commitments to economic goals and the legitimate means for pursuing those goals. Where there is greater willingness to use any means necessary to pursue goals, and a preference for the most expedient tools available, the response to property crime victimization is more likely to be violent and lethal in nature. Likewise, where such anomic conditions predominate, it is more likely that property crimes will end in violence when unanticipated circumstances arise such as a homeowner or third-party interrupting a burglary or other theft. This may not be common, but given the large number of property crimes relative to homicides, even a small number of property-crimes-turned-homicide could yield a sizable increase in the homicide rate (see Rosenfeld and Fornango 2007, 742, for a similar argument). Formally speaking, then, we expect that the positive effect of property crime rates on homicide rates will be stronger in areas characterized by unbalanced pecuniary value commitments.

In summary, classic and contemporary anomie theories make a compelling argument for how the combination of a high level of commitment to monetary success goals and a low level of commitment to legitimate means may translate into higher levels of instrumental property crime. Property crimes occasionally lead to lethal outcomes, so anomie theory also may be useful for explaining variation in instrumental homicides across social collectivities. However, the utility of the anomie perspective for explaining variation in overall homicide rates is questionable because existing explanations have not spelled out why the value orientations

central to the perspective would lead to lethal violence in more general ways. We suggest an elaborated anomie model above in which a strong level of commitment to monetary success goals and weak commitment to legitimate means of economic goal attainment translate into higher homicide rates by increasing levels of gun prevalence, illicit drug market activity, and instrumental property crime. Further, according to Merton (1938), the main effects of this unbalanced pecuniary value system on “innovative” responses, such as homicide, property crime, drug market activity, and gun prevalence, should be amplified in contexts of limited legitimate opportunities and low economic attainment, and as argued by Messner and Rosenfeld (2007) these effect should be dampened where there is a high level of commitment to or participation in non-economic social institutions. Finally, we suspect that the causal effects of firearms, drug markets, and property crime on lethal violence will be amplified where there is a relatively strong commitment to monetary success goals and a weak commitment to legitimate means.

2. Data and Methods

2.1. Data

We examine the relationships highlighted above with data from several sources that describe levels of lethal violence, instrumental property crime, illicit drug market participation, the availability of firearms, levels of commitment to pursuing monetary success goals, levels of commitment to using legitimate means to pursue monetary success goals, and several other aggregate-level characteristics across seventy-four geographic areas in the United States for the mid-to-late 1970s. Our sample is somewhat smaller than the one used by Baumer and Gustafson (2007) because we could not locate data for all cases on our proposed mediating variables, but the overall patterns revealed in our data (e.g., means, variances, correlations) are virtually identical to the patterns they report.

2.2. Units of Analysis and Sample

The units of analysis for our study represent seventy-four of the eighty-seven metropolitan areas and non-metropolitan counties that compose the sampling frame for the American General Social Survey (GSS).³ We adopt these units of analysis because they permit us to construct measures of some of the key constructs emphasized in classic and contemporary anomie theories. Most notable in this regard are the indicators of levels of commitment to monetary success and to legitimate means, which cannot be derived from other sources and are only asked on a consistent basis in the GSS during the mid-to-late 1970s. The GSS sampling units are selected with the purpose of generating a nationally representative sample of households in the continental United States and, given this sampling scheme, the units chosen reflect a broad sample of geographic areas across the nation. Moreover, because samples drawn within these units are “self-representing,” aggregated responses from the sample units are designed to be representative of the population from which they are drawn (for a more detailed discussion of GSS sampling methods, see Davis and Smith 1998, Appendix A). Capitalizing on this feature of the data collection, a growing number of studies have aggregated individual responses from the GSS for purposes of constructing measures of key theoretical constructs that are not readily available from alternative sources (e.g., Baumer, Messner, and Rosenfeld 2003; Kleck 2004; Moody and Marvell 2005; Rosenfeld, Messner, and Baumer 2001). We follow the lead of the latter studies by using the GSS to aggregate responses within our sample units to construct aggregate-level measures of concepts that are central to evaluating the empirical validity of the mediating and moderating hypotheses derived above from the elaborated model of anomie theory.

2.3. Measures

To preserve the temporal order implied in the elaborated anomie model outlined above, we assess the effects of

³ Past research on crime and social control has shown that the GSS sample of counties and metropolitan areas generates aggregate-level 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).

explanatory measures constructed from the GSS and other sources estimated approximately for 1975–76 on levels of instrumental property crime, illicit drug use and market activity, firearm prevalence, and homicide rates estimated for 1977. In doing so, we assume that the value discrepancy that is central to classic and contemporary anomie theories (i.e., a strong commitment to monetary success goals coupled with a weak commitment to legitimate means) exhibits a short lag in generating higher levels of property crime, drug use and drug market activity, and firearm prevalence, and that these phenomena have a contemporaneous effect on levels of lethal violence. As noted above, the general time frame for our research—the mid-to-late 1970s—was dictated by the unique opportunity this period offers to measure aggregate-level constructs relevant to anomie theory in the GSS, most notably the central construct based on our reading of Merton’s theory and IAT (i.e., the degree to which social collectivities exhibit an unbalanced pecuniary value complex).

2.3.1. Dependent Variable

Homicide rate. The dependent variable in our study is the overall rate of homicide, which we constructed using data on homicides and population counts from the National Center for Health Statistics (NCHS) compressed mortality file. Given that homicide is a relatively rare event, especially in some of the non-metropolitan areas in our sample, we followed conventional practice and constructed a three year average homicide rate centered around 1977. Specifically, we obtained the average annual number of deaths recorded between 1976 and 1978 which had homicide as an underlying cause and the annual estimated population for this period to compute the homicide rate for our sample units, defined as the number of homicides per 100,000 residents.

2.3.2. Hypothesized Mediating Variables

A large portion of our analysis is devoted to examining whether firearm prevalence, levels of illicit drug use and drug market activity, and property crime rates mediate any observed effect on homicide of levels of commitment to monetary success and levels of commitment to legitimate means. Thus, measures of these constructs serve as key explanatory variables in our analysis.

Firearm prevalence. We combine two indicators shown in prior research to be the best available means by which to capture spatial variation in levels of gun prevalence: a survey-based estimate of the percentage of households that contain at least one handgun, and public health data on the percentage of suicides committed with a firearm. The literature suggests that survey-derived measures are the “gold standard” for gauging levels of firearm prevalence across geographic areas, and several recent assessments have concluded that among the many other indicators used to measure gun prevalence, the fraction of suicides committed with a firearm is superior with respect to criterion validity (Azrael, Cook, and Miller 2004; Cook and Ludwig 2004; Kleck 2004; Rosenfeld, Baumer, and Messner 2007). Accordingly, we used the geocoded GSS described above to construct a measure of the percentage of households in our sample areas that contained one or more pistols, and we used data from the NCHS to estimate the percentage of suicides committed with a firearm. The GSS measure was created by aggregating within our sample units responses to an item asked between 1975 and 1977 that inquires about whether there is a pistol in the home (see also Kleck 2004; Rosenfeld, Fornango, and Rengifo 2007). The firearm suicide measure was created by obtaining estimates of total suicides and firearm suicides in our sample units for 1977 and using these two counts to compute the percentage of all suicides that involved a firearm. Prior research has documented that these two measures are highly correlated across geographic areas (e.g., Kleck 2004), so we standardized and summed the items to form a single index, which we label firearm prevalence ($\alpha=88$).

Illicit drug use and drug market activity. Measuring illicit drug use and drug market activity for local areas within the United States has proven to be challenging (National Research Council 2001). Absent sufficient survey data on drug use patterns and routine or widespread data collection on drug market conditions for subnational geographic units, previous studies have relied mainly on police-based data sources and medical records from emergency rooms and coroner’s offices. The indicators most often used in aggregate-level crime studies in the United States have been arrest rates for drug sales and drug-induced death rates (e.g., Baumer et al. 1998; Blumstein 1995; Fryer et al. 2007; Messner et al. 2007; Ousey and Lee 2004; Rosenfeld,

Fornango, and Rengifo 2007; Warner and Coomer, 2003). Although other indicators (e.g., drug testing results from arrestees, drug pricing data) are available for specific periods and places, drug arrest rates and drug mortality rates have been shown in recent research to exhibit the greatest degree of shared variance among available measures (Fryer et al. 2007). Accordingly, we draw from UCR arrest data to construct a measure of the number of arrest for the sale or manufacture of illicit drugs per 100,000 and from NCHS data to construct a measure of the number of drug-induced deaths per 100,000 in our sample units for circa 1977. In both cases, the estimates are based on data pooled between 1976 and 1978 to increase the stability of the measures. Also, because the drug mortality rate was positively skewed, we applied a log transformation to the measure. The two drug activity indicators are only moderately correlated in our sample ($r=.35$), so we analyzed them separately in the analysis presented below.⁴

Property crime. The indicator of property crime used in our analysis is a composite 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. We used county-level data from the Uniform Crime Reporting (UCR) program to construct this measure, which reflects the number of robberies, burglaries, larcenies, and auto thefts known to the police per 100,000 residents in our sample units for 1977.

2.3.3. Explanatory Variables

The key explanatory variables in our analysis are levels of commitment to monetary success and levels of commitment to legitimate means. We used the GSS to construct indicators of these concepts, which we view as the centerpiece of classic and contemporary anomie theories, at least as articulated by Merton (1938, 1968) and by Messner and Rosenfeld (1994, 2007). Specifically, we combined GSS data from 1973 to 1976 and aggregated survey responses within our sample units to construct estimates of the degree of

commitment among members of the population to pursuing monetary success and the degree of commitment to legitimate means of pursuing monetary success goals. 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 pursuing 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. On the basis of the theoretical discussion outlined above, if anomie has a role in explaining variation in lethal violence, we would expect the greatest levels of homicide to be experienced in sample jurisdictions in which there is a relatively high level of commitment to monetary success goals and a relatively weak commitment to legitimate means, a situation we would label as an unbalanced pecuniary value complex.

We use the two measures just described to form a product term where higher values represent a more highly unbalanced pecuniary value system. As elaborated below, an important step in assessing our mediation hypotheses is to test for an effect of this product term on homicide and the proposed mediators—firearm prevalence, illicit drug activity, and property crime. In doing so, we test both for

⁴ The strength of this relationship is weaker than the correlations presented by Fryer et al. (2006) for cocaine/heroin arrest rates and cocaine death rates across relatively large social aggregates

in America. This may be because our sample contains a more diverse mix of areas, including relatively small non-metropolitan counties.

a possible “main effect” of our indicator of an unbalanced pecuniary value system and for several interaction effects that evaluate the moderating role of the social structural elements emphasized in the anomie theories articulated by Merton (1938) and Messner and Rosenfeld (2007). To reiterate, Merton (1938) suggested that an insufficient stock of opportunities suitable for members of the population to pursue monetary success goals and the degree to which available opportunities fail to yield achievement of monetary success for all may amplify the criminogenic effects of an unbalanced pecuniary value system. Messner and Rosenfeld (2007) argued that stronger commitments to and investments in non-economic social institutions may mitigate the likelihood of illegitimate responses to an unbalanced pecuniary value system. Given these arguments, we incorporate measures aimed at capturing variation across social collectivities in the availability of legitimate opportunities for pursuing monetary goals, the degree of economic achievement, and the strength of educational, familial, political, religious, and community social institutions. The specific measures are summarized in Appendix A and described more fully by Baumer and Gustafson (2007).

2.3.4. Control Variables

We also include in our analysis several measures directed at capturing key concepts emphasized in some of the most prominent alternative aggregate-level theoretical perspectives (e.g., routine activities theory, social disorganization theory) as well as other known correlates of crime (e.g., Kopsowa, Breault, and Harrison, 1995; Land, McCall, and Cohen, 1990). These control variables include time spent watching television, population structure, police officers per capita, age structure, structural disadvantage, and regional location. For a thorough discussion of the rationale for the inclusion of these variables and for further details about the

sources from which they were drawn and how they were constructed, see Baumer and Gustafson (2007). We briefly summarize the specific measures used in Appendix A, but to conserve space and maintain focus on key coefficients of interest, we omit the control variables from the other tables (results available upon request).

2.4. Analytical Strategy

We use OLS regression to examine the effects of the explanatory and control variables on instrumental crime rates.⁵ 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 multivariate regression models that examine the empirical predictions outlined above. Our initial focus in the regression analysis is on examining whether homicide rates are significantly higher in areas with a high level of commitment to monetary goals and a low level of weak commitment to using legitimate means for pursuing monetary success, which we test by incorporating a two-way interaction term that reflects the product of these two indicators. The empirical expectation is for a statistically significant positive coefficient for the interaction term. The next stage of our analysis involves testing whether any observed effect of this two-way interaction term (i.e., our indicator of unbalanced pecuniary value commitments) on homicide is mediated by the indicators of firearm prevalence, illicit drug use and drug market activity, and property crime rates, as suggested earlier. Technically, our analysis represents an example of a complex form of mediation (mediated moderation), but standard procedures for assessing mediation remain appropriate (see MacKinnon, Fairchild, and Fritz 2007). Specifically, after establishing whether the interaction term representing unbalanced pecuniary value commitments is associated with homicide,

⁵ We tested for normality and homoscedasticity of error variance in the homicide models using standard diagnostic tests. These tests revealed no major deviations from normality among the residuals. A plot of the residuals against the fitted values revealed no signs of significant heteroscedasticity, but the two formal tests we applied (White’s test and the

Breusch-Pagan test) yielded inconsistent evidence and suggested the possibility of mild heteroscedasticity in our data. We thus estimated models in OLS with and without a correction for heteroscedasticity (the HC3 estimator) and we estimated all the models of interest using negative binomial regression. In each case, the estimated parameters were very similar

and the substantive conclusions were identical. We therefore present the unadjusted OLS results below. We also assessed the potential ill effects of multicollinearity by inspecting closely standard errors across models as well as standard diagnostics. The VIFs and tolerance levels associated with the models displayed below were well within the acceptable range.

we examine whether this interaction term exerts significant effects on the hypothesized mediating variables and then we compare its estimated effects on homicide in models that include and exclude the mediators. An additional issue we examine in this process is whether the magnitude of the effects of our indicator of unbalanced pecuniary value commitments on homicide, property crime, illicit drug activity, and firearm prevalence is conditioned by social structural conditions such as the availability of legitimate opportunities, absolute and relative levels of economic and educational achievement, and the strength of non-economic social institutions. This analysis involves testing for three-way statistical interactions (e.g., commitment to monetary success X weak commitment to legitimate means X availability of legitimate opportunities). Finally, we also evaluate whether any observed tendency for the three potential mediating variables in our analysis—property crime, illicit drug activity, and firearm prevalence—to elevate homicide rates is amplified in the context of a high degree of commitment to monetary goals and a weak commitment to using legitimate means to do so. This analysis also involves testing for possible three-way interactions, in this case between the proposed mediators and our indicator of unbalanced pecuniary value commitments.⁶

3. Results

Before turning to the regression results, it is instructive to consider the descriptive statistics for the key variables represented in our hypotheses, presented here in Table 1. The average homicide rate for the seventy-four areas represented

in our sample is 8.20 per 100,000 residents, which is very similar to the national rate for this period. There is considerable geographic variation in homicide rates, however, with a few of the smaller non-metro areas experiencing no homicides and other areas experiencing more than 20 homicides per 100,000.

Many of the explanatory variables exhibit comparable variability across the geographic areas in our sample. For instance, on average, 21 percent of all households in the areas reported that there was a pistol in their residence, but this varied from 0 to 46 percent. Also, 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, on average, 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 employment opportunities, economic attainment and inequality, and commitment to and participation in non-economic 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.

⁶ To enhance the interpretability of the interactions estimated in our regression models, each of the predictor variables hypothesized to form multiplicative relationships was mean centered (Aiken and West 1991; Jaccard and Turrisi 2003).

Table 1: Descriptive statistics for dependent variable and explanatory variables (N=74)

Dependent variable	Mean	SD
Homicide rate (per 100,000)	8.20	5.69
Mediating variables		
Firearm prevalence ^a	0.00	1.87
% of suicides committed with firearm	58.37	17.83
% of households with pistol	21.56	10.37
Drug arrest rate (per 100,000)	227.72	148.12
Drug mortality rate (per 100,000)	-0.18	1.20
Property crime rate (per 100,000)	5,466.37	1,929.13
Explanatory variables		
Value commitments		
Commitment to monetary success	29.61	8.10
% agreeing that next to health, money is most important		
Weak commitment to legitimate means	23.29	7.73
% agreeing there are no right or wrong ways to make money		
Social structural position		
Limited job availability	0.97	0.09
Low educational and economic attainment ^a	0.00	4.23
Educational and income inequality ^a	0.00	1.78
Strength of non-economic social institutions		
Educational		
% government expenditures on education	50.46	7.66
Pupils per teacher	21.09	5.38
Familial		
Time spent with family ^a	0.00	2.49
Commitment to marriage ^a	0.00	1.70
Political		
Voter participation ^a	0.00	1.91
Welfare assistance ^a	0.00	1.71
Religious		
Civically engaged church adherence rate	19.41	9.19
Community		
Social capital ^a	0.00	3.26

^aMulti-item standardized additive scale.

We display correlations between the key variables in Table 2. As noted by Baumer and Gustafson (2007), there is a significant positive, albeit relatively weak, linear relationship between levels of commitment to monetary success and weak commitment to legitimate means ($r=.265, p < .05$). Neither of these variables exhibits a significant linear association with homicide rates. This is perhaps not surprising in light of the strong emphasis in classic and contemporary anomie theories on their presumed interactive effects, an issue that will be explored in the multivariate analysis. For the same reason, it is perhaps not surprising that neither of these commitment measures is independently related to the hypothesized mediating variables—firearm prevalence,

drug arrest rates and drug mortality rates, and property crime rates. However, it is notable that each hypothesized mediating variable exhibits a statistically significant moderate association with the homicide rate. This provides some initial favorable evidence that these indicators could serve as meaningful ways to link anomie theory, and in particular an unbalanced pecuniary value system, to lethal criminal violence. Finally, many of the other explanatory variables emphasized in prior research and theory, including indicators of non-economic institutional strength highlighted in IAT, yield significant negative relationships with homicide rates.

Table 2: Bivariate correlations for dependent and explanatory variables (N=74)

Variable	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)
(1) Homicide rate	1.000																	
(2) Firearm prevalence	0.332*	1.000																
(3) Drug arrest rate	0.496*	0.136	1.000															
(4) Drug mortality rate	0.290*	-0.121	0.346*	1.000														
(5) Property crime rate	0.495*	-0.003	0.526*	0.529*	1.000													
(6) Commitment to monetary success	0.127	-0.045	0.038	0.047	0.124*	1.000												
(7) Weak comm. to legitimate means	-0.086	-0.089	-0.098	-0.158	-0.080	0.265*	1.000											
(8) Limited job availability	0.024	-0.177	0.149	0.128	-0.051	0.200	0.231	1.000										
(9) Low educational and economic attainment	0.171	0.361*	-0.033	-0.080	-0.382*	0.055	-0.105	0.257*	1.000									
(10) Educational and income inequality	0.264*	0.273*	0.137	-0.031	-0.222	0.149	0.049	0.183	0.699*	1.000								
(11) % government expenditure on education	-0.135	0.180	-0.248*	-0.116*	-0.467*	-0.003	0.012	0.154	0.488*	0.373*	1.000							
(12) Pupils per teacher	0.031	0.306*	0.083	-0.131	0.003	0.013	-0.086	-0.019	0.011	-0.034	-0.236*	1.000						
(13) Time spent with family	0.106	0.219	-0.233*	-0.239*	-0.442*	0.013	-0.030	0.082	0.613*	0.447*	0.390*	0.083	1.000					
(14) Commitment to marriage	-0.267*	0.280*	-0.307*	-0.439*	-0.667*	-0.082	-0.024	0.022	0.485*	0.243*	0.387*	0.100	0.366*	1.000				
(15) Voter participation	-0.297*	-0.274*	-0.183	-0.081	-0.200	-0.146	0.023	-0.147	-0.076	-0.183	0.104	-0.097	-0.085	0.309*	1.000			
(16) Welfare assistance	-0.071	-0.146	0.013	0.045	-0.240*	0.048	-0.143	0.085	0.632*	0.444*	0.144	-0.067	0.413*	0.256*	0.112	1.000		
(17) Church adherence rate	-0.430*	0.034	-0.406*	-0.550*	-0.567*	-0.164	0.077	-0.312*	-0.024	-0.117	0.145	-0.077	0.138	0.497*	0.296*	-0.097	1.000	
(18) Social capital	-0.561*	-0.352*	-0.282*	-0.189*	-0.125	-0.164	-0.031	-0.286*	-0.350*	-0.407*	-0.045	-0.125	-0.257*	0.217	0.449*	-0.027	0.408*	1.000

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

3.1. Direct Effects of Unbalanced Pecuniary Value Commitments

The first stage of our multivariate analysis involves evaluating the effect of unbalanced pecuniary value commitments on homicide rates while controlling for other relevant factors. This is substantively interesting itself, and it also allows

us to determine whether there is an effect of an unbalanced value complex on homicide that might be explained by variation in the hypothesized mediating variables. The first column of Table 3 provides unstandardized OLS coefficients and standard errors for such a model.

Table 3: Regression of homicide rates, firearm prevalence, illicit drug activity, and property crime on unbalanced pecuniary value commitments and other factors.

Independent variables	(1) Homicide rate	(2) Firearm prevalence	(3) Drug arrest rate	(4) Drug mortality	(5) Property crime rate
Commitment to monetary success X	0.018*	0.001	0.695*	0.002	11.106**
Weak commitment to legitimate means	(0.008)	(0.003)	(0.303)	(0.002)	(2.443)
Commitment to monetary success	-0.107	0.0002	-1.961	0.002	17.693
	(0.060)	(0.019)	(2.250)	(0.017)	(18.161)
Weak commitment to legitimate means	0.055	0.009	0.474	-0.014	40.270
	(0.070)	(0.023)	(2.615)	(0.020)	(21.104)
Limited job availability	-7.117	-5.004*	123.192	-0.507	-2275.441
	(6.049)	(1.953)	(225.592)	(1.705)	(1820.603)
Low educational and economic attainment	0.408	0.069	-10.259	0.072	37.182
	(0.248)	(0.080)	(9.247)	(0.070)	(74.624)
Educational and income inequality	-0.447	-0.260	-17.151	-0.057	-298.870*
	(0.463)	(0.150)	(17.266)	(0.130)	(139.345)
% Government expenditures on education	-0.186*	-0.004	-3.948	-0.004	-85.071**
	(0.072)	(0.023)	(2.667)	(0.020)	(21.523)
Pupils per teacher	-0.109	0.059*	1.948	-0.025	-15.974
	(0.084)	(0.027)	(3.127)	(0.024)	(25.238)
Time spent with family	-0.549*	-0.166*	-26.195**	-0.122	-220.613**
	(0.252)	(0.082)	(9.416)	(0.071)	(75.987)
Commitment to marriage	0.674	0.293*	3.090	-0.083	-250.109*
	(0.407)	(0.131)	(15.184)	(0.115)	(122.543)
Voter participation	0.142	-0.090	1.076	0.073	128.495
	(0.273)	(0.088)	(10.200)	(0.077)	(82.317)
Welfare assistance	-0.277	-0.258	32.616	0.134	97.068
	(0.447)	(0.144)	(16.679)	(0.126)	(134.603)
Civically engaged church adherence rate	-0.071	-0.011	-3.318	-0.033	-59.093**
	(0.070)	(0.023)	(2.607)	(0.020)	(21.042)
Social capital	-0.409*	-0.122	-6.817	-0.017	66.363
	(0.201)	(0.065)	(7.496)	(0.057)	(60.498)
R ²	0.649	.661	.278	.370	.723

*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.

The results show that several of the explanatory variables exert significant effects on homicide rates. Net of other factors, homicide rates were lower in the late 1970s in U.S. geographic areas where education comprised a larger share of overall spending, families spent more time together, and levels of social capital were higher. Also, consistent with past research, one of the control variables (the indicator of resource deprivation, a scale that combines percent black and percentage of families headed by a female) exerts a strong positive effect on homicide rates (not shown). Most importantly given the focus of our research, after controlling for many other factors we observe in Model 1 a statistically significant interaction effect for the variable that represents the product of levels of commitment to monetary success goals and weak commitment to legitimate means for pursuing monetary goals ($b=.018$, $p < .05$). This interaction effect is in the theoretically expected direction; including it yields a significant improvement in model fit compared with a model that excludes it, and the magnitude of the interaction is non-trivial. For example, setting the other variables to their sample means, Model 1 yields a predicted homicide rate in areas with very high levels of commitment to monetary success and very low levels of commitment to legitimate means (i.e., 2 standard deviations above the mean on these variables) that is about 44 percent higher than the predicted rate in areas with low levels of commitment to monetary success and strong commitment to legitimate means (9.74 homicides per 100,000 compared to 6.77 per 100,000).

The remaining four models in Table 3 regress each of the hypothesized mediating variables on the explanatory and control variables used in the previous model. A significant effect of unbalanced pecuniary value commitments on these variables will suggest the potential for mediation in the relationship between anomie and homicide. Indeed, we find that two of the four mediating variables—drug arrest rate and property crime rate—are significantly influenced

by unbalanced value commitments. These effects are in the expected direction, such that areas with unbalanced value commitments tend to have higher rates of drug arrests and property crime. However, we find no evidence that unbalanced value commitments lead to higher rates of drug mortality or firearm prevalence. In fact, none of the explanatory variables listed in the table is significantly related to the drug mortality rate, though one of the control variables that we do not include in the table—police per capita—does exert a significant effect at conventional levels and several other variables considered (e.g., time with family, civically engaged church adherence, and population structure) yield theoretically expected effects that attain significance using a one-tailed test.

3.2. Indirect Effects of Unbalanced Pecuniary Values on Lethal Violence

The significant positive effect on homicide of our indicator of unbalanced pecuniary value commitments reported in Table 3 suggests that classic and contemporary anomie theories are relevant to explanations of lethal criminal violence, but as noted above, why would unbalanced monetary value commitments in an area translate into a higher rate of *homicide* given that only a modest proportion of crimes motivated by financial interests directly lead to murder? We explore three possible avenues in the regression models displayed in Table 4 where we regress homicide rates on the same set of variables as shown in the previous tables along with each of the potential mediating variables added one-by-one in subsequent models and then simultaneously in a final summary model. For ease of comparison, we display in Model 1 of Table 4 the results reported in Table 3 for the significant positive effect on homicide of our indicator of unbalanced pecuniary value commitments. The other four regression models reported in Table 4 are relevant to assessing whether this effect can be explained by firearm prevalence (Model 2), illicit drug use and drug market activity (Model 3), property crime (Model 4), or a combination of these factors (Model 5).

Table 4: Regression of homicide rates on firearm prevalence, illicit drug activity, property crime, unbalanced pecuniary value commitments, and other factors (N=74)

Independent variables	(1)	(2)	(3)	(4)	(5)
Commitment to monetary success X	0.018*	0.018*	0.011	0.005	0.002
Weak commitment to legitimate means	(0.008)	(0.008)	(0.008)	(0.009)	(0.009)
Firearm prevalence	--	0.270	--	--	-0.015
	--	(0.428)	--	--	(0.392)
Drug arrest rate	--	--	0.012*	--	0.009
	--	--	(0.003)	--	(0.004)
Drug mortality rate	--	--	-0.287	--	-0.444
	--	--	(0.451)	--	(0.448)
Property crime	--	--	--	0.001*	0.001*
	--	--	--	(0.0004)	(0.0004)
Commitment to monetary success	-0.107	-0.107	-0.084	-0.128*	-0.104
	(0.060)	(0.061)	(0.056)	(0.057)	(0.055)
Weak commitment to legitimate means	0.055	0.053	0.046	0.007	0.007
	(0.070)	(0.071)	(0.065)	(0.068)	(0.066)
Limited job availability	-7.117	-5.767	-8.689	-4.375	-6.474
	(6.049)	(6.449)	(5.586)	(5.774)	(5.866)
Low educational and economic attainment	0.408	0.389	0.548*	0.363	0.503*
	(0.248)	(0.251)	(0.234)	(0.234)	(0.231)
Educational and income inequality	-0.447	-0.377	-0.265	-0.087	-0.039
	(0.463)	(0.479)	(0.430)	(0.454)	(0.441)
% Government expenditures on education	-0.186*	-0.185*	-0.142*	-0.084	-0.072
	(0.072)	(0.072)	(0.067)	(0.077)	(0.074)
Pupils per teacher	-0.109	-0.125	-0.139	-0.090	-0.123
	(0.084)	(0.088)	(0.078)	(0.079)	(0.081)
Time spent with family	-0.549*	-0.504	-0.280	-0.283	-0.155
	(0.252)	(0.264)	(0.253)	(0.256)	(0.257)
Commitment to marriage	0.674	0.595	0.614	0.976*	0.844*
	(0.407)	(0.428)	(0.377)	(0.398)	(0.405)
Voter participation	0.142	0.166	0.150	-0.013	0.044
	(0.273)	(0.278)	(0.254)	(0.263)	(0.257)
Welfare assistance	-0.277	-0.207	-0.616	-0.394	-0.618
	(0.447)	(0.463)	(0.429)	(0.423)	(0.436)
Civically engaged church adherence rate	-0.071	-0.068	-0.042	0.000	0.000
	(0.070)	(0.070)	(0.067)	(0.070)	(0.068)
Social capital	-0.409*	-0.376	-0.335	-0.489*	-0.416*
	(0.201)	(0.209)	(0.186)	(0.191)	(0.192)
R ²	0.649	0.645	0.703	0.689	0.716

*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.

We find no evidence that firearm prevalence is associated with elevated homicide rates or that it explains any of the observed effects of the variable designed to gauge unbalanced pecuniary value commitments (Model 2). This conclusion persists in supplementary analyses in which we substitute (one by one and simultaneously) the two individual measures of firearm prevalence for the composite index shown in the table. We also reach the same conclusion from two-stage least squares (2SLS) models in which, following past research, we use exclusionary restrictions (percentage of residents who are hunters, levels of conservatism, percentage of residents who have served in the military) as an instrument for firearm prevalence (Kleck 2008; Rosenfeld, Baumer, and Messner 2007).

In Model 3 we see that one of the indicators of illicit drug activity—the drug arrest rate—exerts a statistically significant effect on homicide rates ($b=.012$, $p < .05$), a finding that is consistent with other recent studies in the United States (Baumer et al. 1998; Baumer 2008; Ousey and Lee 2004). Also, after adding drug arrest rates to the model the coefficient for the product term representing differences in unbalanced pecuniary value commitments falls by more than one-third and drops below conventional levels of statistical significance. Unsettled questions about the validity of drug arrest rates as an indicator of illicit drug market activity and drug use vs. police activity, coupled with possible endogeneity concerns with the link between drug arrest rates and homicide, should serve as reminders to be cautious in drawing strong conclusions from these results. Nevertheless, the findings suggest that one reason a high level of commitment to monetary success goals and weak commitment to legitimate means may translate into higher homicide rates is that it stimulates participation in illicit drug markets.

We assess the mediational role of property crime rates in Model 4. As expected, the indicator of property crime exhibits a statistically significant positive effect on homicide rates ($b=.001$, $p < .05$). The unstandardized coefficient is relatively small because of scaling, but evaluating the standardized coefficients (not shown) reveals that property crime rates exert the second strongest effect on homicide among the variables considered (the resource deprivation control variable has the strongest effect). And, consistent

with expectations, property crime rates account for more than two-thirds of the observed main effect of the interaction term for commitment to monetary success and weak commitment to legitimate means, an interaction that is no longer statistically significant once property crime rates are incorporated. This is consistent with the idea that an unbalanced pecuniary value complex elevates lethal violence because it stimulates involvement in property crimes that can directly or indirectly lead to homicides.

We add all the hypothesized mediators in Model 5, and the conclusions mirror those drawn in the previous models. In this specification, we again see that of the proposed mediators, only drug arrest rates and property crime rates are significantly associated with homicide rates. These effects are in the expected direction and they result in a substantial attenuation (more than 80 percent) of the coefficient for the product term capturing the central tenet of classic and contemporary anomie theories as we have interpreted them: the interactive effect of a strong commitment to monetary success and a weak commitment to legitimate means. These findings contradict claims that “crime is not the problem” (Zimring and Hawkins 1997). Indeed, crime levels as measured by property crime rates and drug arrest rates emerge in our study as an important consideration in explaining cross-sectional variation in lethal violence and in helping to describe possible linkages between core anomie concepts and lethal violence.

3.3. Social Structural Moderation of Unbalanced Pecuniary Values

As described above, both Merton (1938) and Messner and Rosenfeld (2007) argue that certain social structural conditions may moderate the tendency for a higher degree of imbalance in pecuniary value commitments to translate into a higher prevalence of what these theorists refer to as “innovative” behaviors, which would include property crime, involvement in illegal drug markets, and under some conditions the acquisition of firearms. Evaluating these arguments is of considerable theoretical importance in its own right but, in addition, if significant moderation of this form is found it has potentially important implications for our assessment of the amount of mediation we attribute to the hypothesized mediators and it would alter estimates of the magnitude of both direct and indirect effects of

unbalanced pecuniary values on homicide.⁷ To explore this possibility, we estimated several additional models with homicide and the hypothesized mediators treated as outcome variables. These models examined whether effects observed for the two-way interaction between commitment to monetary success and weak commitment to legitimate means are conditioned by the three indicators of relevance to Merton's theoretical arguments about how an insufficient and unequally distributed supply of legitimate opportunities may amplify the effects of unbalanced pecuniary values (i.e., limited job availability, low educational and economic attainment, and educational and income inequality) and the eight indicators geared toward capturing Messner and Rosenfeld's arguments about how a higher level of commitment to and investment in non-economic social institutions might dampen such effects (e.g., government spending on education, pupils per teacher, time with family, commitment to marriage, voter participation, welfare assistance, civically engaged church adherence, and social capital). We began this assessment by re-estimating the homicide equation displayed in Model 5 of Table 4 several times, adding to the model the implied two- and three-way interaction terms needed to evaluate whether the social structural indicators condition the effects of unbalanced pecuniary value commitments. We did this separately for each of the social structure variables, a process that yielded eleven additional homicide models. We then repeated this process for the other outcomes (firearm prevalence, illicit drug activity, and property crime).⁸ Showing the results of these analyses (forty-four models overall) in tabular form would require a substantial amount of space, so we briefly summarize them and their implications in the text. In general, the dominant story that emerges from these analyses is that we found few instances of significant moderation of our indicator of unbalanced pecuniary value commitments. However, we highlight more specifically four noteworthy patterns that emerged from this portion of our analysis.

First, we found no evidence that the indicators of social structure considered in our study moderate the effects of unbalanced pecuniary value commitments on rates of *homicide*. These findings hold both with and without the proposed mediators in the model. This is an important finding with regard to our primary goal of evaluating the mediating role of gun prevalence, illicit drugs markets, and property crime, as it suggests that our assessment of the extent to which these factors mediate the effect on homicide of an unbalanced pecuniary value system is not influenced by the elements of social structure examined. These null results could be due to the difficulties associated with detecting higher-order interactions in non-experimental research (see McLelland and Judd 1993), but the evidence generated by the data at hand suggests that the social structural conditioning influences implied in classic and contemporary anomie theories do not operate for homicide, at least not directly. However, as we elaborate below, some of these factors have relevance for homicide indirectly.

Second, using a slightly smaller sample and more expansive empirical specification, we replicated the results for property crime reported in Baumer and Gustafson (2007). They showed that the positive effect of a high level of commitment to monetary goals paired with a weak commitment to legitimate means on property crime rates was not amplified under conditions of fewer available jobs, low levels of economic achievement, or high levels of inequality, but that this effect was significantly dampened by higher levels of welfare assistance and greater amounts of time spent with family members. Although the magnitude of the significant three-way interaction effects observed in our study was slightly smaller, we found the same pattern in our analysis, providing further support for Messner and Rosenfeld's institutional anomie theory.

⁷ To elaborate: if the effect of our indicator of unbalanced pecuniary value commitments on homicide rates is moderated by the social structural factors emphasized in the classic and contemporary anomie theories under review, our estimate of the amount of mediation would be contingent on values of those

moderating variables. Also, if certain factors significantly moderate the effects of unbalanced pecuniary value commitments on the hypothesized mediating variables, estimates of indirect effects of such value commitments on homicide would be contingent on values of those factors (MacKinnon et al. 2007).

⁸ To account for the multiple testing involved in these assessments, we adjusted the conventional alpha level of .05 using the procedures for multiple independent tests outlined by Benjamini and Hochberg (1995).

Third, in modeling the drug arrest rate we found a statistically significant effect for a three-way interaction term that combines our two indicator term for unbalanced pecuniary value commitments with the indicator of low levels of educational and economic achievement. Consistent with insights drawn from Merton, this suggests that the observed positive effect of unbalanced pecuniary value commitments on participation in illegal drug markets (measured with drug arrest rates) is significantly stronger when large segments of a population are not realizing legitimate monetary success.

Fourth, although we observed no significant main effect of unbalanced pecuniary value commitments on firearm prevalence (Table 3), we found that this effect was significantly moderated by the availability of jobs and time spent with family. Specifically, consistent with Merton (1938), the results revealed a statistically significant positive effect for a three-way interaction term that combines commitment to monetary success, weak commitment to legitimate means, and the indicator of limited job availability. The results imply that unbalanced pecuniary value commitments yield a higher prevalence of firearms primarily when the labor market is particularly tight. In line with Messner and Rosenfeld's institutional anomie theory (2007), we also find a significant negative three-way interaction involving the two indicators of value commitments and the indicator of time spent socializing with family. This finding parallels the patterns observed for property crime and suggests that the tendency for a high level of commitment to monetary success and a low level of commitment to legitimate means to translate into higher levels of firearm ownership is significantly dampened in areas where families spend more time together.

Overall, these results reveal patterns that are meaningful for general assessments of the relevance of classic and contemporary theoretical arguments about how features of the social structure may condition the likelihood of "innovative" behavioral responses to an unbalanced pecuniary value system. We found no evidence that the direct effect of unbalanced pecuniary value commitments on homicide was significantly moderated by elements of the social structure, which renders our assessment of mediation

unchanged. However, our results do suggest that the effects of this value complex on property crime and involvement in illegal drug markets—the two factors we find to be associated with homicide rates—are conditioned by some of the social structural conditions emphasized in classic and contemporary anomie theories (namely, the availability of jobs, time spent with family, and welfare assistance). This reveals one way in which these elements of the social structure are relevant for lethal violence, and from a practical standpoint it means that the overall magnitude of the indirect effect of the indicator of unbalanced pecuniary value commitments on homicide will vary depending on the prevalence of these factors.

3.4. Unbalanced Pecuniary Values and the Amplification of Lethal Violence

We now turn to a final issue that we feel is important to a full assessment of the relevance of anomie theory to lethal violence. Specifically, we examine whether an unbalanced pecuniary value complex amplifies the degree to which higher levels of firearm prevalence, illicit drug activity, and property crime translate into lethal violence. As noted earlier, in many ways the use of lethal violence is an extreme example of pursuing prescribed monetary goals "by any means necessary" and thus, we would expect the presence of firearms and involvement in property crime and illegal drug markets to more often yield lethal outcomes in contexts where there is a greater pecuniary value imbalance. This implies three-way statistical interaction effects on homicide involving each of the hypothesized moderating variables and our two indicators of value commitments. We tested for these effects by re-estimating Model 5 of Table 4 several times after adding the implied three-way interaction terms and corresponding lower-level interaction terms. The results of these models (not shown in tabular form) can be described succinctly: although the relevant coefficients are uniformly in the right direction, we find no evidence that the effects on homicide of firearm prevalence, illicit drug activity, and property crime rates are statistically contingent on the level of commitment to monetary success and legitimate means.

In supplementary analyses (not shown), we also considered a broader set of possible moderator variables of the gun,

drug, and property crime effects. We were motivated to do so because it appears that within the United States and cross-nationally there are contexts in which guns, drugs, and property crime are much more likely to translate into lethal violence than elsewhere (Zimring 2006). Thus, Europe has property crime rates that are similar to rates of property crime observed in the United States, yet much lower levels of lethal violence. Although less well documented, illicit drug markets in Europe also appear to generate much less violence than American drug markets. These interesting patterns stimulated us to evaluate in our data whether high levels of economic stress or firearm prevalence raise the proclivity of drug markets and widespread property crime to generate lethal violence. In only one instance did we detect a statistically significant interaction of this type: property crime exhibits a significantly stronger effect on homicide rates when achievement levels are depressed. Other dimensions of economic stress (e.g., inequality and poverty) or other factors (e.g., police numbers) do not play this type of moderating role in our data.

4. Discussion and Conclusion

In recent years, efforts to explain variation in crime rates across social collectivities as a function of anomic social conditions have led to a growing number of empirical tests of classic and contemporary anomie theories. Despite a strong emphasis in the theoretical literature on explaining instrumental, money-generating crime, much of the empirical literature has examined variation in levels of *homicide*, with little justification for expanding the scope conditions to include lethal violence. Certainly some proportion of all homicides are economically motivated, and thus fall squarely within the stated scope of anomie theories, but these instrumental homicides comprise a small share of total homicides by most accounts. Yet, prior research does find a significant link between various indicators of anomie and homicide rates, which suggests that an expansion of the scope conditions of anomie theories to include homicide may be feasible.

The purpose of the current study was to identify and empirically test several potential ways in which an unbalanced pecuniary value system may influence spatial variation in levels of lethal violence. Our initial results indicated that

homicide rates tend to be higher in areas where a strong commitment to monetary success is paired with a weak commitment to legitimate means, even after controlling for a broad array of characteristics identified by various theoretical perspectives as predictive of homicide. However, after introducing several theoretically meaningful intervening mechanisms, we no longer found a direct effect of this unbalanced value system on rates of lethal violence. Specifically, we found that drug arrest and property crime rates reduced this effect by more than 80 percent and rendered it non-significant. We believe that although these indirect pathways are not explicitly identified in either classic or contemporary versions of anomie theory, they are nonetheless consistent with their core arguments, including the likelihood of criminal innovation in response to the pressures of achieving monetary success, and a willingness to use any means necessary to achieve material goals. These findings suggest an important elaboration of the anomie perspective by identifying the ways in which an unbalanced pecuniary value system can lead to increased homicide rates, thus providing an explicit justification for expanding the scope of anomie theory to include levels of *lethal* violence.

Our other expectations regarding the persistence of a direct effect of an unbalanced set of value commitments, the mediating influence of gun prevalence, and the moderating roles of drug markets, gun prevalence, and property crimes were not supported. Not only was there an absence of evidence that gun prevalence mediates the effect of unbalanced pecuniary value commitments on homicide rates, there was in fact no significant role of firearm prevalence anywhere in the causal chain. This is perhaps not surprising given the mixed results in extensive prior research examining the link between guns and homicide (Kleck 1991). Kates and Polsby (2000), for example, explain that during much of the period between 1973 and 1999, which includes the years of our study, the United States experienced a dramatic increase in firearm prevalence but a stable or decreasing homicide rate. Even when firearm availability and homicide rates do trend in the same direction, several explanations have been offered that contradict the claim of a recursive causal link from guns to lethal violence (Southwick 1997; Kleck, Kovandzic, and Schaffer 2005; Lott 2000).

In addition to the possibility that there is simply not a causal link between gun prevalence and homicide, and thus no potential for it to mediate the effect of unbalanced value commitments on homicide, we suggest an alternative explanation for the absence of a significant role of gun prevalence. Prior research has found that criminals typically acquire guns through transactions in the secondary market or by stealing them (Wright and Rossi 1986; Zawitz 1995; Sheley and Wright 1993). Thus, a substantial proportion of crime guns are initially purchased through legal primary markets, and then make their way through a series of transactions and events into the hands of criminals. This would seem to support the validity of a survey-based measure of household gun ownership as a proxy for measuring the extent to which guns are available for committing crime. However, this argument may only be applicable to the measurement of gun availability in periods with strict gun control laws, such as the 1994 enactment of the Federal Assault Weapons Ban and the Brady Act, both of which made it more difficult for criminals to acquire guns through legal channels. Since our measures of firearm prevalence are drawn from a period when there were fewer restrictions on the legal purchase of firearms, it is possible that our measure may not be strongly associated with the prevalence of guns “on the street” (Cohen, Engberg, and Singh 2002; Stolzenberg and D’Alessio 2000). Future research might examine alternative measures of gun prevalence, perhaps restricted to areas in and around illegal drug and property crime markets or restricted to younger persons, which may better reflect the supply of guns to would-be offenders. Likewise, analyses using more recent data may provide different results since measures of household gun ownership and gun-related suicide rates may be more valid proxy measures of the prevalence of crime guns in later time periods when there were more restrictions on the ability of criminals to purchase guns legally.

We also did not find support for our expectation that a direct effect of unbalanced pecuniary value commitments on homicide rates would persist, although greatly reduced, even after controlling for illicit drug market activity, property crime, and firearm prevalence. Since anomie theories explicitly purport to explain variation in money-generating crimes, we expected that including both instrumental and

expressive forms of homicide in our dependent variable would yield both direct and indirect effects of an unbalanced value system; any effect of anomic conditions on expressive homicide would operate indirectly, and any effect on instrumental homicide would be direct. The absence of a direct effect may provide support for the argument that instrumental and expressive forms of homicide are more similar to one another than they are unique (Felson 1993; Miethe and Drass 1999), but this requires further investigation. Conducting separate analyses for different types of homicide is beyond the scope of the current study and would present several complications because of the high prevalence of missing information in the data system in which homicide circumstances are recorded in the United States (i.e., the Supplementary Homicide Reports) and given that many of the smaller areas in our sample did not report such data for the period under review, but we see this is an important avenue for future research.

Both Merton’s anomie theory (1938) and Messner and Rosenfeld’s institutional anomie theory (2007) predict that features of the social structure may condition the effects on illegal activity of unbalanced pecuniary value commitments. We examined these predictions using available indicators of the availability of jobs, absolute and relative levels of economic achievement, and non-economic institutional strength. Our analyses suggest that the direct effect of an unbalanced pecuniary value complex on homicide is not conditioned by these factors. However, we found that this value complex is more apt to translate into high levels of illegal drug market activity when jobs are scarce and less likely to translate into high property crime rates when accompanied by more extensive socializing within families and greater levels of welfare support. This suggests that one heretofore unexamined way that the availability of jobs, time spent with family, and the degree of government welfare assistance influence homicide rates is by conditioning the extent to which unbalanced value commitments yield higher rates of instrumental crime (i.e., participation in property crime and illegal drug markets). These results may have relevance for patterns observed in cross-national research on homicide, which has shown that government policies that soften the negative consequences of free-market economies can mitigate the homicidal tendencies

of adverse economic conditions and associated pressures (Savolainen 2000; Pratt and Godsey 2003; Messner and Rosenfeld 1997). Although the extant research has assumed that these policies shape homicide in a relatively direct fashion by moderating presumed causes of *lethal violence* (e.g., inequality and other proxies for an unbalanced pecuniary value system), it could be instead that they condition the effects of unbalanced pecuniary value commitments on *property crime and illegal drug market activity*, which in turn influence homicide. Future research should explore this issue while also considering the importance of measuring not just the strength of noneconomic institutions and the extent to which residents are embedded within them, but also the variable effect that these institutions may have on serious crime depending on whether they have been penetrated by, and forced to accommodate, the dominance of the economy (Chamlin and Cochran 2007; Messner and Rosenfeld 2005). For example, strengthening education as an institution, or increasing political participation, may ameliorate the effect of unbalanced value commitments by strengthening commitments to legitimate means or by providing alternative definitions of success. However, if these institutions have been co-opted by the economy as Messner and Rosenfeld suggest, strengthening them could actually perpetuate or even exacerbate the effect of unbalanced pecuniary value commitments.

Another issue we wish to emphasize is that property crime, gun prevalence, and illegal drug markets are not inherently violent, as evidenced by their weak association with homicide in developed nations outside the United States. This suggests the need to explain the conditions under which they may translate into elevated levels of lethal violence. By evaluating a series of three-way statistical interactions, we explored the relevance of anomie theory in identifying these conditions. Our expectation that an unbalanced pecuniary value system would moderate the effects of illicit drug activity, gun prevalence, and property crime on homicide rates was not supported empirically. We suggest caution, however, in interpreting these results too strongly and perhaps prematurely rejecting the possibility of conditional effects of guns, drugs, and property crime on homicide. Our reluctance is partly due to the challenges inherent in detecting moderator effects in observational

data (McClelland and Judd 1993). Though we did find a significant two-way interaction in our initial model showing the effect of unbalanced value commitments on homicide rates, the difficulty in detecting moderation increases with higher-order interactions such as the three-way interactions required to estimate the moderating effects that we hypothesized, and this difficulty may be compounded by factors such as measurement error and our relatively small sample size (Aiken and West 1991).

A final issue that is important to consider in future scholarship on anomie theory concerns the relevance of the theoretical arguments and empirical relationships across different social and cultural contexts. With respect to theoretical relevance, in our view the classic and contemporary anomie perspectives considered above are general explanations for variation in crime and violence across social collectivities, and we see no *a priori* reason that the causal pathways implied in these perspectives would be more or less relevant across (i.e., moderated by) different social and cultural contexts. But some scholars have asserted otherwise, suggesting for example that anomie may be relevant only in highly developed Western societies (Chamlin and Cochran 2007), or in other words that levels of economic development might condition the effects of factors such as an unbalanced value commitment system. Further theoretical development of the underlying reasons for these types of conditioning effects and others that would predict variation across social and cultural contexts in the relevance of the causal processes implied in anomie theory would be a useful addition to the literature.

Even if we conclude that the theoretical relevance of anomie theory is not highly contingent on the social context in which it is applied, from an empirical standpoint there may be reason to believe that analyses that test the core ideas of anomie theory *vis a vis* homicide might yield different findings across different social contexts, including nation-states or territories within nations. Messner and Rosenfeld (2007) argue that the United States is “exceptional” in the sense that rates of serious crime in the United States are strikingly higher than in other developed nations, that American culture is uniquely characterized by an extreme imbalance between cultural pressures for monetary success and a weak cultural commitment to using legitimate means, and that

the economy dominates and subjugates other social institutions that might otherwise restrain these intense cultural pressures for monetary success. Though our empirical findings suggests heterogeneity across social collectivities within the United States with regard to these core elements of anomie theory, perhaps certain aspects of our empirical analysis would render different results when applied to the widely varying contexts across Europe. For example, one of the goals of our analysis was to identify the conditions under which high rates of property crime and illicit drug crime lead to elevated levels of lethal violence. Our failure to detect moderating effects of unbalanced pecuniary value commitments may be due to another aspect of “American exceptionalism”—a general desensitization to crime and an acceptance of violence in daily life (Messner and Rosenfeld 2007; Anderson 1999). Anderson (1999), in particular, believes that areas with high levels of crime, such as the illicit drug and property crimes that we identify as mediators, are characterized by a predominant belief that the use of violence, and even lethal violence, can be an acceptable response to personal affronts and an effective means of survival. If this is a commonly held belief surrounding property crime and illicit drug markets in our sample areas, we may not expect that unbalanced pecuniary value commitments would amplify the effect of property and drug crime levels on homicide rates. However, in nations other than the United States, criminal markets are not so uniformly violent and there may be more potential for unbalanced value commitments to condition the effects of property and drug crime rates on levels of homicide. Thus, we believe that applying this analytical model to social contexts outside of the United States would constitute an important advancement of the anomie perspective.

In conclusion, our primary goal in this study has been to question the relevance of classic and contemporary anomie theories for explaining variation in homicide rates, and hopefully to stimulate discussion of the ways in which anomie perspectives may be expanded to explicitly incorporate levels of lethal violence in their scope. While our findings do not invalidate prior research that assumes only a direct effect of anomic conditions on homicide rates, they do suggest that the processes through which an unbalanced pecuniary value system influences levels of lethal violence are complex and require additional attention. Though

further research is necessary to draw firm conclusions about these causal pathways both within and outside of the United States, we believe our findings present an important step in explicating the links between anomic social conditions and homicide.

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Appendix: Description of selected variables included in the analysis of anomie and homicide

Variable	Variable definition
<i>Social structural position</i>	
Limited job opportunities	Ratio of total persons aged 16 and older who are employed or seeking employment to number of jobs available.
Low educational and economic attainment	Six item standardized scale that combines the percentage aged 16-19 who are not high school graduates or currently in school, the percentage of persons aged 25 and older who did not finish high school, the percentage of persons in the civilian labor force who are unemployed, the percentage in the labor force employed in non-management and non-professional jobs, the percentage of families with incomes below the poverty line, and the mean self-reported social class standing of community residents (4=lower class . . . 1=upper class).
Educational and income inequality	Two item standardized scale that combines the Gini index of family income inequality and the Gini index of educational inequality.
<i>Strength of non-economic social institutions</i>	
Educational	
Pupils per teacher	Pupils per teacher for schools in sample areas.
% of government spending devoted to education	Percentage of government spending devoted to education.
Political	
Voter participation	Two item standardized scale combining the percentage aged 18 and older registered to vote and the percentage of registered voters who voted in the Presidential election.
Welfare Assistance	Two item standardized scale combining the percentage of poor families receiving welfare and the average monthly welfare payment per poor person, adjusted for local cost of living.
Familial	
Time with family	Three item standardized scale combining the percentage who socialized several times a month with siblings, parents, and other relatives.
Commitment to marriage	Two item standardized scale combining the percentage of respondents currently married and the percentage indicating support for laws making it more difficult to divorce.
Religious	
Civically engaged church adherence rate	The number of persons per 100,000 who adhere to civically engaged church denominations.
Community	
Social capital	Four item standardized scale combining the percentage who say 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.
<i>Control variables</i>	
Daily television viewing	Mean number of hours residents spent watching television in a typical day.
Population structure	Two item standardized scale combining logged population size and logged population density.
Resource deprivation	Two item standardized scale combining the percentage of residents who are poor, the percentage of families with children headed by a female, the percentage of residents who are black, and median family income.
Age structure	Percentage age 16 to 34.
Police strength	Police officers per 100,000 residents.
Region	Dummy variable indicating community location in a Southern state (0=non-south; 1=south)

Social Structural Effects on the Level and Development of the Individual Experience of Anomie in the German Population

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Social Structural Effects on the Level and Development of the Individual Experience of Anomie in the German Population

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Can one observe an increasing level of individual lack of orientation because of rapid social change in modern societies? This question is examined using data from a representative longitudinal survey in Germany conducted in 2002–04. The study examines the role of education, age, sex, region (east/west), and political orientation for the explanation of anomia (micro level) and its development. First we present the different sources of anomie in modern societies, based on the theoretical foundations of Durkheim and Merton, and introduce the different definitions of anomia, including our own cognitive version. Then we deduce several hypotheses from the theory, which we test by means of longitudinal data for the period 2002–04 in Germany using the latent growth curve model as our statistical method. The empirical findings show that all the sociodemographic variables, including political orientation, are strong predictors of the initial level of anomia. Regarding the development of anomia (macro level) over time (2002–04), only the region (west) has a significant impact. In particular, the results of a multi-group analysis show that people from West-Germany with a right-wing political orientation become more anomic over this period. The article concludes with some theoretical implications.

1. The Problem

Anomie is a central sociological concept. Interest in anomie as a topic waned during the late 1970s and 1980s, but since the early 1990s more attention has been paid to it in both international and research in Germany (inter alia Attkisson 1999, Passas and Agnew 1997; Heitmeyer 1997; Bohle et al. 1997; Adler and Laufer 2000). Building on theories developed by Durkheim (1983) and Merton (1968, 1995), many modifications of theoretical models have been posited in the course of time, for instance by Passas (1997), Agnew (1997), and Messner and Rosenfeld (1997), from which different definitions of the concept have emerged (Wakenhut 1983)¹. An important aspect in our context is the distinction drawn between anomie and anomia. *Anomie* refers to the structural level and describes a weakening of regulative and integrative social forces that either results from rapid social

change or is structurally immanent. *Anomia* is located at the individual level and means a loss of normative orientation and of control over situations and goals of action, which however are dependent on the socially anomic constitution. According to Abercrombie et al. (1988, 11; quoted from Passas 2000, 97) anomie can be seen as a concept that bridges the gap between explanations for social action at the individual level and at the level of social structure. Thus, implicitly at least there is a bridge between the social and the individual level (structural and action level), or between *anomie* and *anomia* (Albrecht 1997, 512; Merton 1995, 156; Byrne 1977)². In terms of a program of structural and individual explanation, this means that social phenomena can be explained by way of assumptions at the micro level if simultaneously a link is made between the action theory

¹ While Besnard (1988) is highly critical of the variety of concepts where the concept of anomie is concerned, others, such as Passas (2000) and Horton (1964), stress the positive aspects.

² Although, in research into anomie theory, a debate still exists on the connection between or transferability of macrotheoretical assumptions to the individual level (debate: Bernard 1987 and Agnew 1987).

core and the structural level (e.g. Maurer 2006, 145; Coleman 1991; Esser 1993; Hedström 2005).

Against this background one must assume that current social developments, especially in structurally weak regions such as eastern Germany, produce corresponding effects at the individual level. Recent studies on the individual experience of anomie (i.e. anomia), similarly to older studies mainly originating in the U.S. research context (e.g. Barnett 1970; Middleton 1963; Roberts and Rokeach 1956, 358), find only partial evidence to back up this assumption.³ Herrmann, for instance, comes to the conclusion on the basis of ALLBUS (General German Social Survey) data “that neither have the dramatic processes of change in the new federal states of eastern Germany led to a demonstrably higher subjective lack of orientation among the people who live there, nor . . . do sociostructural factors adequately explain the extent of a person’s anomia” (Herrmann 2001, 114). Similarly, Glatzer and Bös (1997) interpret their findings based on the Wohlfahrt survey data as follows: “This means that either the key determinants of anomie [anomia] have yet to be discovered, or that accelerated social change and economic crises affect all population groups to an equal extent” (Glatzer and Bös 1997, 580; but see also Blank 2003; Oepke 2005).⁴ In contrast, Kühnel and Schmidt (2002) and Hüpping (2006) show, on the basis of representative surveys conducted in 2002 and 2005, a clear connection between anomia and various sociodemographic variables (especially level of education).

However, the problem with previous studies on the explanation for and incidence of *anomia* is that they permit no precise conclusions as to the extent to which sociostructural factors influence and change the incidence of anomia. Most findings are based on cross-sectional or trend surveys⁵, while longitudinal surveys tend to be the exception (e.g.

Oepke 2005; Grundmann et al. 1997; Blank 2003). Moreover, the few that do exist only permit conclusions about social sub-groups, because of the specific nature of the survey sample (parents and youth sample: Oepke 2005; youth sample: Grundmann et al. 1997; exception, representative sample: Blank 2003).

Our paper aims to tackle precisely these problems. Our main objective is to clarify whether during the course of social changes the level of anomia among the population changed between 2002 and 2004 and, if so, whether it is possible to identify variations in dependency on socio-structural features. We focused especially on comparisons between eastern and western Germany because of their different social structures and the pace of change in recent years.

In doing so we were responding to the call of Bohle et al. (1997, 60) to examine which sociostructural factors seem to be especially relevant to the genesis of anomia. Answering this question was all the more urgent in that recent investigations have focused increasingly on the potential consequences of anomic attitudes. Possible patterns of reaction to a high degree of anomia range from political apathy (Boehnke 2006, 158), the manner of communication with parents and peers (Morgenroth and Boehnke 2003), the individual position taken on the question of immigration (Rippl 2003), and the development of derogatory attitudes towards weak groups in society, right through to a general propensity to violence (e.g. Herrmann 2001; Kühnel and Schmidt 2002; Fuchs 2003; Hüpping 2006; Stolz 2000; Terwey 2000). The question of which indicators are relevant for anomia, in contrast, has tended to receive marginal treatment. This paper aims to make it the central focus of attention, since finding an answer to it may be of practical relevance.

³ Stronger links between social structure characteristics and anomia are, in contrast, to be found in Hoffmann-Nowotny et al. 2001 (for second-generation immigrants to Switzerland); Stolz 2000 (for the Swiss population); Li 1999 (for the Chinese population); Scheepers et al. 1992 (for the Dutch population).

⁴ Blank (2003), for example, finds on the basis of data from a representative survey at the same time (1993) a very slight overall extent of anomic feeling and, in addition, no differences between western and eastern German respondents (Blank 2003, 273).

⁵ The term “trend survey” means several representative studies with different samples over time.

The distinguishing features of our contribution are, first, the use of a longitudinal survey design and, second, a method of analysis, the LGC, or latent growth curve model (Urban 2002; Reinecke 2005; Bollen and Curran 2004, 2006), rarely used in sociology with the exception of criminological studies (e.g. Raudenbush and Bryk 2002, Nagin and Land 1993; Nagin 1999, for an overview see Kreuter and Muthén 2008). Admittedly, even this data basis only permits one to test the relationship between anomie and anomia implicitly. However, it is then possible to examine whether anomia is relatively stable (McClosky and Schaar 1965; Hopf et al. 1999) or changes occur over time, and specific sociodemographic characteristics can explain such changes.

In section 2, after a brief overview of the potential social sources of anomie we give a short presentation of previous concepts of *anomia* and the definition adopted in this paper. We go on to formulate hypotheses about differences in the degree of anomia and how it changes over time, using different sociodemographic variables. Then we describe the data basis, the operationalization of anomia and the method of analysis used. In section 4, our analyses are presented step by step. In the final section we summarize our findings and discuss them, pointing out gaps in research and suggesting promising research approaches.

2. Anomie and Anomia and Characteristics Relevant to its Incidence

2.1. Anomie

Present-day (Western) societies are characterized by enormous change. This is evident in the transition from an industrial to a service-based society; in policies of increasing deregulation, privatization and liberalization; in increasing global networking using new information and communication technologies; the growing significance of markets; and the simultaneous increase in economic instability and

vulnerability through mass and long-term employment, etc. (Blossfeld 2005; Schumann 2003; Ebbinghaus et al. 2006, 75ff.; Thome and Birkel 2007, 139; Dallinger 2006, 92, 98; 2004, 114; critically: Stehr 2007). Durkheim stated long ago (1897, 329) that rapid social changes encourage the emergence of *acute* social anomie (normlessness) that can lead to socially harmful modes of behavior (in extreme cases suicide or murder), unless effective social regulatory forces are simultaneously available in the form of the state or via its intermediaries, such as professional bodies.⁶ In many Western societies, from the mid-twentieth century this role was played by welfare state arrangements. However, there is increasing evidence to suggest that these requirements are no longer comprehensively fulfilled. Thome and Birkel (2007) even speak in the context of social change of a “general structural problem” of modern societies. In the course of social acceleration, new and sometimes conflicting requirements for action have emerged (e.g. mobility, flexibility, dealing with complexity, etc.). More decisions have to be taken and more information has to be processed in a shorter time and more change, more “structural stress” (Müller and Schröttle 2006, 87) has to be coped with than in the past. Social security decreases as options increase (Zapf 1987, 138; Beck 1986).

In contrast to Durkheim, Merton (1938, 1968, 1995) sees not change but a specific societal state as a potential source of anomie. This occurs when the legitimate means for achieving culturally fixed and generally valid goals are not distributed equally among all population groups (Merton 1968, 292). Thus society is *structurally anomic* as defined by Merton (1968, 1995) inasmuch as it formulates the same binding goals for all members of society (e.g. occupational success), but fails to provide for all its members equally effective and legitimate coping strategies for dealing with the high rates of change.⁷ For how the new challenges are perceived, coped

⁶ In addition, Durkheim also sees modern societies as being in a constant anomic state that he terms “chronic anomie.” These assumptions are found more specifically in the institutional theory of anomie outlined by Messner and Rosenfeld (1997, 2001), so that we here dispense with any further description of Durkheim’s second version of anomie (1983, 292).

⁷ Merton himself refers only to anomie. To draw a clearer distinction between the different forms of anomie we have qualified Merton’s concept of anomie as “structural.” This type of anomie is comparable with the “chronic anomie” type in Durkheim’s work *Suicide*, which in turn is labeled as “disintegrative individualism” by Thome (2007, 193–94; see also Thome 2003).

with and, if the situation arises, exploited, depends primarily on the specific life situation and on sociostructural characteristics such as educational level, age, and gender (Elder 1974; after Diewald et al. 1996, 220). Concerning possible reactions to the experience of social anomie, Merton elaborates different modes of adaptation. Of particular significance in exploring violent behavior are *innovation*, whereby goals are adhered to but legitimate means are replaced by more effective (illegitimate) means, and *rebellion*, whereby culturally determined goals and means are rejected and instead a new social order is aspired to (Merton 1968, 293–311). The two other non-conformist modes of adaptation are *ritualism*, whereby goals are abandoned but social rules are still followed, and *retreatism*, whereby both goals and means are abandoned (e.g. addicts, homeless people, etc.). The scientific literature still more or less ignores these, although much evidence suggests that these types of adaptation are very common, as evident from the steadily growing number of depression-related illnesses.⁸

Thus the ways of adapting to anomic social conditions described by Durkheim and Merton also involve implicit assumptions about individual states that arise from the experience of social anomie (Israel 1972, 285). Later work in the context of alienation and anomie concepts has concentrated especially on this individual experience of social anomie (anomia) (e.g. Srole 1956; Seeman 1959).

2.2. Anomia

The particular problem with research on individual facets of anomie (i.e. anomia), has always been that it often ignores social conditions, or deliberately neglects to relate it back to them. MacIver (1950), who was first to use the concept of anomie to describe an individual state, refers to it as a mental state (as do McClosky and Schaar 1965) without addressing the issue of social causes. Linked to this there is a simultaneous shifting of the analysis of causes to the individual (with personality deficits) (Dreitzel 1972, 53; Fischer

1970). Srole (1956), following Merton's theory of anomie, was the first to turn his attention to the empirical recording of anomia (for a critique of content see Rose 1966; Dreitzel 1972, 54ff.; Friedrichs 1997; for a critique of methodology see inter alia Basler 1977). Yet although Srole postulated a relationship between anomie and anomia, he did not make it explicit. Accordingly, the operationalization of anomia proposed by Srole (normlessness, meaninglessness, pessimism about the future, futility and social isolation) and many subsequent authors (e.g. Middleton 1963) does not seem to be guided by theory to any great extent. The same applies to the theoretical concepts developed by Seeman (1959), who defined anomia (or normlessness) as one of several dimensions (meaninglessness, social isolation, powerlessness, self-estrangement) of a general concept of alienation (Seeman 1959; Wakenhut 1983, 37) based on value expectancy theory. However, according to Israel he did so without providing a precise theoretical argumentation for this selection, for the relationship between alienation and anomia, and the relationship to the social level (Israel 1972, 261ff.). But several empirical studies show that all of the considered facets reflect different dimensions of a general syndrome of alienation. There followed numerous further attempts to reappraise anomie theoretically and record it empirically, with a clear emphasis on the latter (Dreitzel 1972; Fischer 1970; Bohle 1975). Due to the variety of ways in which the concept of anomia is used (e.g. Lukes 1977, 74) it is important to provide a clear definition for our own use of the term.

Starting from the social sources of anomie described above (change, increase in complexity, social inequality), we take anomia to mean a loss of cognitive orientation and confidence to act. "One no longer knows what is possible and what not, what still seems appropriate and what no longer does, which demands and expectations are permitted and which are excessive" (Durkheim 1983, 288). Thus orientation and confidence to act emerge from a "loss of all-embracing long-term cultural orientations" (Duncker 2000, 121; also

⁸ Thus 32 percent of adult Germans suffer from mental illness, and the number of days lost due to it has risen disproportionately compared with other diagnoses (IGES 2005, 44).

⁹ Roberts for example finds intercorrelations between all of the dimensions of the alienation concept of Seeman (1959). "This supports the conclusion that all five types of alienation identi-

fied by Seeman are part of a common domain" (Roberts 1987, 349; similarly Middleton 1963).

Hitzler and Horner 1994, 307). Previously unquestioned, self-evident moral standards, behavioral customs, values and cognitive patterns collide with changing general social conditions (Schultheis 2005, 580). In this manner our definition refers to the “meaninglessness” dimension of the alienation concept by Seeman. According to Seeman (1959, 786) meaninglessness is characterized by “a low expectancy that satisfactory predictions about future outcomes of behavior can be made.”¹⁰ Nowadays, nearly everyone is called upon to adapt repeatedly to changed situations during the course of his or her life, regardless of personal motivation. “Such developments hold both opportunities and risks. Some see plurality and development as pleasant and almost desirable, while for others these states lead to serious stress, not seldom even to overstress” (Duncker 2000, 121f.). Past experience often loses significance, but due to the large number of options and risks, it is less possible to plan the future (Dahrendorf 2003, 44f.). Accordingly, current scope for action is limited to the present. Increasingly, lifelong identity patterns are being replaced by *situational identities* (Rosa 2005). Opportunities are growing as calculability declines.

This conception distances us from Merton inasmuch as we do not directly work on the basis of normative disorientation arising from the experience of discrepancies between goals and means, but on that of cognitive uncertainties of action and orientation, though these may precede the former, or (can) emerge simultaneously, respectively.¹¹ We assume that anomia consists of two dimensions, one cognitive and one normative, although we concentrate in the following analysis on the cognitive variant of anomia. Merton (1956) himself puts forward additional hypotheses about further potential sources of anomia that are certainly compatible with our assumptions. According to Merton, *first* there are situations in which ambivalent norms exist, *second* situations in which many values exist but members

are not allowed to define which are important, and *third* situations that contain insufficient, deficient norms in relation to others, or ambiguities (Merton 1956). Our concept is also reconcilable with Durkheim’s theoretical assumptions inasmuch as anomia signifies a perception that can be described as a direct reaction to social change and associated cognitive disorganization. However, at the same time we assume (following Merton and unlike Durkheim) that the extent of individual experience of anomie varies depending on sociostructural characteristics.

2.3. Hypotheses Concerning the Relationship between Anomia and Sociostructural Characteristics

For our study we have chosen sociostructural characteristics that lead one to assume that patterns of incidence differ (Thorlindsson and Bjarnason 1998, 97). Integration risks, in particular, still depend on earning opportunities that are determined especially by the level of education. Along with these, however, there are “new” inequality indicators that correlate with a large number of problem areas. In this respect, relevant factors in addition to educational level are age, gender, and place of residence (broken down into eastern and western Germany). Accordingly, these were taken into account in our analyses. In addition to these indicators we also took account of political orientation. In the following we propose and examine twelve hypotheses in respect to the indicators we have taken into account. We developed hypotheses both for the initial level of anomia and its rate of change. The content of hypotheses marked *a* relates to the initial level and that of hypotheses marked *b* to the rate of change. We will now outline the individual hypotheses (see Table 1).

¹¹ Roberts (1987) finds low to moderate intercorrelations between normlessness and meaninglessness ($r = .27$), whereas Middleton (1963) finds higher ones ($r = .59$). Whether these two dimensions appear at the same time or whether the cognitive dimension predicts the normative dimension is primarily an

empirical question. But in any case, it is important to separate these dimensions from the intention to act in a deviant way and deviant behavior, respectively.

Table 1: Anomia level and change hypotheses.

Level hypotheses (2002)	Change hypotheses (2002–04)
East/West	
H1a: The initial anomia level is higher among people in eastern Germany than among people in western Germany.	H1b: Anomia increased in equal measure between 2002 and 2004 among people in western and eastern Germany.
Age	
H2a: Older people are more anomic than younger people.	H2b: Anomia increased at a faster rate among older people between 2002 and 2004.
H3a: Younger people are more anomic than older people.	H3b: Anomia increased at a faster rate among younger people between 2002 and 2004.
Education	
H4a: People with a lower level of education have a higher initial anomia level than people with a higher level of education.	H4b: People with a lower level of education become more anomic than people with a higher level of education due to the growing risks.
Gender	
H5a: Women have a higher anomia level than men due to the complex demands made upon them and their poorer career prospects.	H5b: The level of anomia among women rose faster than among men between 2002 and 2004 due to the deterioration in economic conditions that affected them more than it affected men. ¹²
Political orientation	
H6a: People with a right-wing political orientation have a higher level of anomia than people with a moderate or a left-wing political orientation.	H6b: Anomia increases more over time among people with a right-wing political orientation than among people with a moderate or left-wing political orientation because societal developments more quickly diametrically oppose their convictions. ¹³

¹² An alternative hypothesis could, however, be formulated just as easily. Due to the breakup of classical role concepts and the stronger societal need for action in the family and social context—as institutionalized by parenting benefit (Elterngeld), for example—the anomia level among men has risen more sharply over time.

¹³ An increase in anomia levels among people with a left-wing political orientation would at first glance appear to be equally plausible. Due to German history and government policies we assume, however, that people with a right-wing political orientation feel more anomic and that their anomia level rises more sharply over time.

We assumed that anomia does not represent a stable individual disposition but a socially induced subjective uncertainty that depends (primarily) on the quality and quantity of rates of social change. Our basic assumption also formed the basis for the further analyses. Accordingly, we assumed that the level of anomia had changed during the period from 2002 to 2004.

With respect to place of residence (eastern or western Germany), we assumed that economic crisis in the new federal states of eastern Germany had led to a greater uncertainty of orientation and action and that anomia therefore features more strongly among *people in eastern Germany* than among those from western Germany. As regards the rate of change of anomia we assumed no difference between the two subgroups. Negative economic trends such as growing unemployment, insecure employment conditions, etc. became established in the mid-1990s to a greater extent in eastern Germany (Diewald 2006, 285), but also in western Germany (Grotheer et al. 2005, 134ff.; Bonß 2001, 349). Accordingly, we assumed that they impacted in equal measure on the anomia level of individuals in both western and eastern Germany.

As regards *age* we tested two hypotheses about the level and development of anomia and age. First, we assumed that older people, on account of their experience of severe crises in the first half of the twentieth century, had learned to cope with them better. Moreover, to a large extent, older people are already professionally established. On the other hand, younger people, especially adolescents and young adults, have yet to start their working lives and, due to higher mobility, etc., are usually involved in more fragile social networks than middle-aged and elderly people. Due to the relatively poor economic situation young people are exposed to a multiplicity of demands from educational establishments, employers, etc. Yet performance and success no longer guarantee a secure occupational future (Hurrelmann and Albert 2006,

17). Given this line of argument, younger respondents ought to show higher degrees of uncertainty of action and orientation and correspondingly higher anomia levels than older people. In addition, we assumed that the extent of anomia among younger respondents rose more rapidly in the period from 2002 to 2004 due to the deterioration of the economic situation, growing pressure to perform, etc.

Another line of argument is equally plausible, however. Due to their somewhat traditional norms and values and the associated concepts of action, older people have fewer strategies for coping with the pace of rapid social changes. Therefore, they are often confronted with situations that conflict with their norms or are ambiguous, and that increasingly gives rise to uncertainties of action or orientation. Moreover, older employees, along with female and low-skilled workers, are a group that runs a relatively high risk of unemployment, a risk that has intensified in recent years as a result of rising unemployment and associated competition from younger workers (Struck and Köhler 2005, 15). Thus it could be assumed that anomia would be more pronounced in older respondents and had risen more rapidly in line with increasing risks.

In respect of *educational level* we surmised that individuals with a higher level of education were more likely to be able to react flexibly to the large number of changes and to adapt to them or learn something different. Merton suggested that they thus have more means at their disposal for taking advantage of social developments and achieving the culturally determined goals. Moreover, low-skilled workers as a group run the biggest risk of unemployment (Diewald 2006, 286ff.; Ebbinghaus et al. 2006) and face greater occupational instability (Grotheer et al. 2005, 15of.). Thus qualifications obtained through training and work can be said to have a segmenting effect (Struck and Köhler 2005, 15). Following on from these assumptions, not only ought people with a lower level of education have a higher initial level of anomie but

the level should rise more sharply due to the growing significance of educational qualifications and the associated risks.

We see *gender* as another key demographic variable. For some years now, women have been under particular pressure. True, as education has expanded their training opportunities have improved, but they are still disadvantaged in many occupations, both as regards career opportunities and in terms of equal pay for equal work. “Evidently the contradiction between emancipation on the one hand and the codification of (gender) inequality and discrimination in the flexible, market-centered capitalist mode of production on the other have brought the problem to a head but not necessarily led to a solution” (Frey et al. 2005, 276).

Imbalances still exist in the family context, too. Thus women are still confronted to a greater degree with the need to reconcile family and career. Regardless of the quality of a partnership, “the major share of family tasks” (Pinl 2004, 23) falls to women as “managers of everyday life” (Ludwig et al. 2002). Young women in particular face numerous difficulties because training, occupational integration, and finding a partner and starting a family are compressed into a very short timeframe, the so-called “rush hour of life” (Hurrelmann and Albert 2006, 17). That being so, we assumed that gender was still a “structuring principle” (Frey et al. 2005, 277), that women (also because of the lack of female role models) would therefore have more difficulties with the increasingly complex demands than men, and that their individual experience of anomie would not only be more pronounced but would also have increased more rapidly in recent years.

To augment the sociodemographic characteristics we tested the influence of *political orientation* on the individual experience of anomie. In contrast to most previous studies, which tend to see a right-wing political orientation as a reaction to uncertainty and lack of orientation, we assumed

14 Stolz (2000) is one of the few researchers who does not see political views as a reaction to the individual experience of anomie but regards traditionalistic and conservative values as a possible

cause of heightened lack of orientation (in a world that is detraditionalizing itself). At a correlative level he is also able to confirm this assumption (Stolz 2000, 155). Here as in the studies mentioned earlier,

the problem of cross-sectional design remains, with many alternative directions of causality being consistent with the data (see, for example, Bollen 1989).

with reference to Stolz (2000) that political alignment might encourage anomia.¹⁴ Looking at current social trends, one can ascertain that in many respects they run counter to the convictions of individuals with a right-wing political orientation. This discrepancy might produce uncertainties. Accordingly, we assumed that fear of traditional values being lost or eroded, the increase in ethnic and cultural heterogeneity, growing internationalization, etc., would go hand in hand with uncertainty about orientation and behavior. This assumption does not conflict with previous views that see right-wing political views as a possible reaction to individual experience of anomie, but is seen as augmenting them. Accordingly, we assumed not only that people with a right-wing political orientation would display higher levels of anomie but also that these levels would have risen more rapidly over time.

3. Sample, Measurement Instruments, and Statistical Method

3.1. Sample

To test our hypothesis we used data from the longitudinal project “Group-focused Enmity” (Heitmeyer 2002). Since 2002 an annual representative survey with its main focus on prejudices has been augmented by a longitudinal design. In the analyses in this paper, we were able to take three waves into account (2002: N=2722; 2003: N=1175; 2004: N=825). This was a relatively short period for investigating possible developmental effects on individual attitudes. However, it was also a period when radical changes took place (e.g. an increase in the unemployment rate, a rise in corporate bankruptcies [after a decline in 1999], a drastic drop in the number of people employed in industry (e.g. the construction industry), and so we presumed there would be impacts. Data was collected at all three test times via computer-assisted telephone interviews. Response rates for the total panel and the panel after adjustment were nearly identical. The actual response rate for Wave 2 was just under 58 percent, which is satisfactory, while for Wave 3 it was 77 percent, which is good. Only in Wave 1 there was some systematic panel mortality as regards sociodemographic

characteristics. Here, men and eastern German respondents were more likely to agree to be reinterviewed. Table 2 shows the distribution of sociodemographic factors relevant to us in the initial sample.¹⁵

Table 2: The sample

Sample	N = 2,722
Gender	Male: 44.3% (N = 1,207) Female: 55.7% (N = 1,515)
Age	Average: 45.94 (S.D.=16.26)
East/West	Eastern Germany: 35.5% (N = 966) Western Germany: 64.5% (N = 1,756)
Education	Tertiary: 18.4% (N = 496) Abitur (university entrance qualification): 21.1% (N = 569) Mittlere Reife (secondary school level I certificate): 35.6% (N = 959) Hauptschule (basic school-leaving certificate): 24.3% (N = 653) No qualification: 0.5% (N=14)
Political orientation	Left-wing: 5.9% (N = 157) Left of center 22.1% (N = 583) Middle of the road 61% (N = 1.612) Right of center 9.2% (N = 244) Right-wing 1.7% (N = 46)

3.2. Measurement Instruments

A very wide range of scales is now available for recording individual experiences of anomie (Robinson et al. 1991, 291ff.). This is due not least to the diverse definitions of anomie and anomia (e.g. Wakenhut 1983, 35ff.; Passas 2000, 97). Along with the Srole scale (1956), German researchers mainly use the scales developed by Middleton (1963) and by McClosky and Schaar (and, in German, Fischer and Kohr 1980). The two items we used come from the latter. Although McClosky and Schaar (1965) maintained that these items were used to measure “normlessness,” at the content level the items are more consistent with Seeman’s

¹⁵ Checks of systematic panel mortality took the form of three logistical regression analyses. The findings show that readiness to be reinterviewed

among men in Wave 1 (odds ratio = 1.36, $p < .05$) and among respondents from eastern Germany (odds ratio = 0.76, $p < .05$) was higher. For Waves

2 and 3, in contrast, sociodemographic characteristics no longer play a part (Christ 2006).

“meaninglessness” dimension, which places the emphasis on an inability to understand events and their interconnections. Thus, they do not measure normative disorientation in the sense of Merton or Durkheim. Anomia in the present parameters can be understood rather as an expression of uncertainty of orientation and action in respect of social conditions resulting from rapid changes. The scale of McClosky and Schaar (1965) is simultaneously the only one to refer explicitly to social change and the individual loss of orientation to which it gives rise, even though the authors, unlike Durkheim, did not conceive of anomie as an attitude arising from rapid pace of social change, but as a stable disposition acquired early in life (similarly to Hopf et al. 1999). However, this would indicate that individual experience of anomie should appear relatively stable over a certain period. Within the context of our analyses we also pursue this question.

The items are:¹⁶

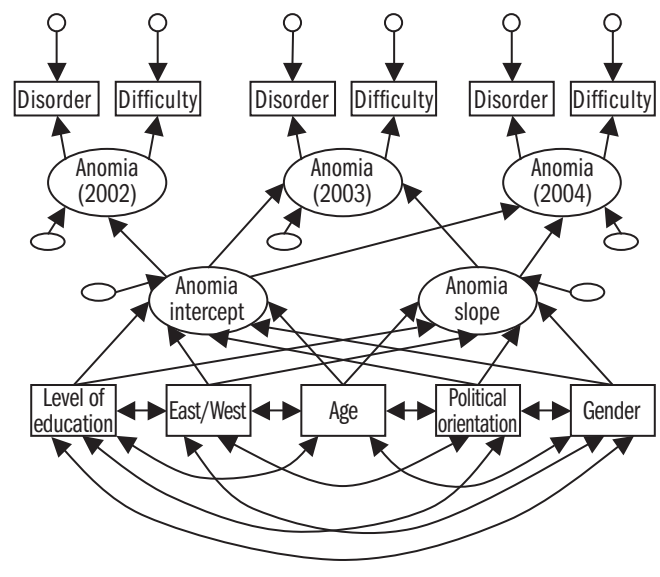
1. Everything has got so confused that nobody knows what’s what any more.
2. Matters have become so difficult these days that you don’t know what is going on.

Internal consistency of the items is satisfactory across all three waves (Cronbach’s $\alpha = .82$ (W1); $.88$ (W2); $.88$ (W3)). Possible responses were placed on a scale of 1 to 4, the extremes being “totally incorrect” (1) and “totally correct” (4). Furthermore a test of validity shows that the measured property can not simply be reduced to a feeling of (relative) deprivation. In fact, there are positive intercorrelations between cognitive anomia and different kinds of deprivation, but all of them are very low.¹⁷

3.3. Analysis Strategy and Method

We chose the Latent Growth Curve Model (LGC) as method of analysis, supplemented by multiple group comparisons (see Figure 1). LGC was developed by McArdle and Epstein (1987) and Meredith and Tisak (1990). This statistical method opens up a series of new analysis possibilities for testing our hypotheses (Schlüter et al. 2006, 319; Reinecke 2006; Bollen and Curran 2004, 2006).¹⁸

Figure 1: Simplified LGC model with exogenous variables (sociodemographic characteristics)



LGC models make it possible to answer a large number of possible questions. Four aspects are especially relevant. In addition to the interindividual initial level of the construct of interest, in our case anomia, one can

¹⁶ The third available item in the data record, “Everything used to be better because you knew what you had to do,” had to be excluded from further analyses in view of the low factor loading (multidimensionality). At the content level the weak load can be explained in terms of this item relating to the past, whereas the first two anomia items relate to the perception of current social conditions (with no yardstick for comparison).

¹⁷ The intercorrelations between anomia and different types of deprivations are (in all three waves) between $r = .12$ und $.24$. In contrast, the correlations between anomia and the fear of a social decline are a little bit higher ($r = .31$ to $.34$).

¹⁸ It is based on the idea that the individual growth of a given construct (anomia) constitutes a function that is based on a latent intercept and a latent slope (growth factor), including random sampling errors. While the latent intercept maps the starting

value of the longitudinal design, the slope reflects the average individual rate of change over time. A univariate LGC with observed indicators can be described as follows: $y_{it} = \alpha_i + \lambda t \beta_i + \epsilon_{it}$. y_{it} is the observed value for each individual i at the point in time t for the indicator y . α_i denotes the latent intercept and β_i the latent slope or growth factors. As the subscript i indicates, these factors are assumed to vary from individual to individual.

- first, estimate *interindividual changes* directly. If the slope factor (growth factor) is significant it means that the characteristic has changed over time. This makes it possible to answer the question whether anomia remains stable over time and thus tends to reflect a disposition, or whether there are intraindividual changes that indicate that the level of anomia depends on external factors.
- Second, *interindividual differences* in the intraindividual changes can be estimated. Significant variance in the slope factor shows that there is interindividual variability in the change in a characteristic. In terms of our complex of questions this would mean that anomia has not increased to the same extent in all respondents in the panel over the course of time, but that there are differences between respondents.
- Third, *determinants for intraindividual changes* can be included in LGC models, and the causes of interindividual differences in intraindividual changes can be examined. In our case, this means that one can test empirically whether, for instance, the level of education as an exogenous variable is an explanatory factor as regards predicting the change in anomia (Christ et al. 2006).
- Fourth, LGC models can be used to carry out multiple group comparisons. This enabled us to test whether the same, or different, sociodemographic characteristics were significant for explaining change in the anomie level in eastern and western German respondents.¹⁹

Figure 1 shows a chart of the model structure. The upper section shows the two indicators of anomia at the test times 2002, 2003, and 2004. It is assumed that they are explained by the underlying latent variable anomia and the random measuring error. The three variables anomia in 2002, 2003, and 2004 are themselves explained by the slope and intercept, along with the error. In the lower part of the chart,

the demographic variables west/east, educational level, age, gender, and political orientation are shown as directly measured variables that are all assumed to correlate. According to our hypotheses, they in turn impact on the slope and intercept, which are assumed to be error-prone.

In accordance with the analysis options described, our *first* step was to show the initial level and rate of change of anomia. The *second* step was to show which sociodemographic variables (determinants) were explanatory factors for the initial level and rate of change of anomia during the period 2002–04. The *third* and final step was to examine on the basis of multiple group comparison whether sociodemographic variables differed between eastern and western respondents in respect of their ability to explain the initial level of and change in anomia over time, and thus whether there were specific interaction effects.

4. Findings

4.1. Initial Level of and Change in Anomia

Table 3 shows the average values and standard deviations of the two apparent indicators of anomia during the period 2002 to 2004. The average scale mean for anomia is shown in Table 4 (2.54). First, however, one must state that the data appears sufficiently compatible with the LGC model.²¹ The significant variance in the intercept in Table 4 indicates that there are *interindividual differences in the initial level of anomia* between respondents. In addition, comparison of the mean values at all three test times shows a change in that anomia increases during the course of time (see Table 3).²²

¹⁹ The model on which the analyses are based contains secondary latent variables (see Figure 1). It is a complex, conditional factor-of-curves model (Reinecke 2005, 321ff.; McArdle 1988; Duncan et al. 1999), in other words the slope and intercept factor are each secondary factors.

²⁰ All of the following analyses were undertaken using the AMOS 6.0 software program (Arbuckle 2005).

²¹ The χ^2 value shows a 0.6 ratio to the degrees of freedom, and the other fit indices also show satisfactory values (RMSEA: .000; pclose: 1.0; CFI: 1.000). Relationships between indicators and constructs are set at equal levels over time so as to ensure metric invariance. For the importance of ensuring metric invariance in analyses with longitudinal data, see, for example, De Beuckelaer 2005).

²² At the frequency level the increase is as follows: In 2002, 47.7 percent of respondents felt the statement that “everything is in such a mess nowadays” was largely or entirely true, while 45.5 percent of respondents largely or entirely felt that “things have become so difficult nowadays.” In 2004 the proportion of respondents who felt that these statements were largely or entirely true had risen to nearly 65 percent.

Table 3: Mean and standard deviation of anomia indicators observed in the three panel waves

	t1 (2002)			t2 (2003)			t3 (2004)		
	N	M	(SD)	N	M	(SD)	N	M	(SD)
Anomia Disorder	2705	2.57	(.91)	1166	2.78	(.90)	825	2.90	(.88)
Difficulty	2705	2.53	(.89)	1173	2.73	(.90)	824	2.87	(.87)

The significant slope factor (S_i) in Table 4 indicates that the extent of the linear latent rate of change in anomia over the observation period increased significantly, by an average of .173 at each test time, and that there are therefore systematic *intraindividual changes*.²³

This data provides provisional confirmation of our basic assumption that anomia is not a stable state but a reaction to rapid changes in society. The significant variance in the growth factor (slope factor) shows that this does apply equally to all respondents. Although the variance is relatively small (.02) and therefore points to only minor *interindividual differences in the change in individual experience of anomie* during the period from 2002 to 2004, this significant indicator, as shown in Table 4, should not be ignored, especially given that the data refer to a period of only two years.

Table 4: Intercept and growth factor (slope) of anomia (2002–04)

	Intercept		Slope	
	M	0 ²	M	0 ²
Anomia	2.54	.393	.173	.020
p	.001	.001	.001	.019

Accordingly, we examine below whether and to what extent sociodemographic characteristics such as being from eastern or western Germany, age, educational level, gender, and political orientation shed light on *interindividual differences*, on the initial level of anomia and on the *intraindividual rate of change*.

4.2. Initial Level of and Changes in Anomia and Incidence Patterns

First, one should note that the fit indices for this model are in the satisfactory range (default model: χ^2 : 66.34; df = 33; CFI = .994; RMSEA = .019; p-close: 1.0). The central section of Table 5 shows that all sociodemographic characteristics significantly influence the initial level of anomia (intercept), with educational level having the greatest effect. The negative path coefficient (b = -.33) shows that the degree of anomia in individuals with a lower level of education is higher than in persons with a higher educational level. This provisionally confirms our hypothesis (H4a) and is consistent with most previous findings.²⁴

Table 5: The effect of sociodemographic variables on the initial level and change rate of anomia (b^* = standardized coefficients)

Effect of sociodemographic characteristics on the intercept and slope of anomia	Intercept		Slope	
	b^*	p	b^*	p
Eastern Germany	.21	.001	-.22	.004
High level of education	-.33	.001	-.03	n.s.
Age	.11	.001	.05	n.s.
Women	.13	.001	.03	n.s.
Left-wing/right-wing	.13	.001	.05	n.s.

Place of residence (eastern or western Germany) also has a relatively strong effect (b = .21). The initial level of anomia is higher in eastern German than in western German people. Thus the longitudinal data (H1a) confirms the finding from several trend analyses (Hüpping 2006). However, given the minor difference in the degree of anomia in eastern and western German persons immediately or shortly after reunification (see especially Blank 2003, based on a similar instrument of measurement), one cannot attribute the difference simply to the change of system. Rather, one must assume that initial optimism has increasingly given way to a general feeling of uncertainty of orientation and action due to the ongoing deterioration in economic conditions. This

²³ By setting two of the estimated basic coefficients a constant linear development trend must be assumed.

²⁴ The findings of Rippl (2002), based on data from a sample of young people, are an exception in this respect. She found no significant mean differences in anomia between young people attending different types of school.

line of argument is supported indirectly by a comparison of the findings of a survey of changes in values (Meulemann 2002) and ESS data (European Social Survey 2002). Whereas in the early 1990s respondents from eastern Germany showed a higher level of support for the merit principle than those from western Germany, this support declined as time went on to a level that was noticeably lower than the level of support among western German respondents. The less eastern German respondents are able to identify with the new order, or the more strongly they associate with the old order and the more keenly they perceive a deterioration in their own situation, the more likely they are to reject the merit principle (Meulemann 2004, 170).²⁵

The effects of gender and political orientation on the anomia level are somewhat less marked, but likewise highly significant. Our hypotheses (H5a, H6a) were that women and individuals with a right-wing political orientation in 2002 would be more anomic than men and persons who tended to be more to the left of the political spectrum.

Finally, age is the weakest explanatory factor for the initial level of anomia ($b = .11$). The finding that older persons suffer more from anomia merely confirms hypothesis H2a. In contrast, younger people, as the findings of the most recent Shell youth surveys corroborate (Hurrelmann and Albert 2002, 2006), seem increasingly to adjust to changing circumstances in such a way as to be geared to fundamental needs and concrete problems. They are thus better able to avoid potential disappointments (“the pragmatic generation”).

Yet this effect can also be explained by age alone. Thus, one can assume that as people grow older their willingness and ability to adjust to changed situations declines. In their study on youth and anomia (temporal disintegration), Morgenroth and Boehnke (2003) point out that age is an

important indicator for explaining individual experience of anomie because it plays a key role in codetermining embeddedness in temporal structures and order. They thus surmise that juveniles, especially, are heavily prone to anomia. In contrast, our data shows that older age groups feel unsettled by the social conditions. Thus at the same time the phase of identity formation in youth has a smaller impact on the feeling of uncertainty of orientation and action than is the case with older people (e.g. those reaching retirement age).²⁶

Summing up, one can state that all the variables included impact on the initial level of anomia. The next question is whether and to what extent these characteristics also explain the rate of change in anomia. The significance and extent of the effects of our chosen variables on the slope (factor) of anomia provide some indications.

The findings are listed in the right-hand section of Table 5. It is striking that, with the exception of inner-German origin, no characteristic has a significant effect on the anomia slope (H2b-6b). Moreover, the east/west effect does not bear out our hypothesis. Therefore we cannot confirm any theoretical propositions concerning the rate of change of anomia. We had assumed that anomia among people in both eastern and western Germany would increase in equal measure between 2002 and 2004 (H1b). However, the significant negative effect ($b = -.22$) tells us that was a sharper increase in the sense of lack of orientation among western German persons. Accordingly, eastern German persons are more anomic in absolute terms, but lack of orientation among western German persons has increased more in relative terms. Moreover, this finding is corroborated as a trend by data from the Group-Focused Enmity survey (Hüpping 2006).

²⁵ Similar results are found in Roßteuscher (2004, 421): the value type of the realist who at the same time has the highest anomia ratings is in eastern Germany also the value type with the most pronounced longing for the GDR of old.

²⁶ There can, however, be no definite clarification of whether this is a genuine age effect or a specific generational feature (generation effect). To clarify this issue, additional panel data from different periods would be required.

This unexpected result is rendered more explicable by the fact that a noticeable deterioration of the economic situation set in only at the turn of the millennium, while respondents from eastern Germany had confronted and experienced economic crises just a few years after the political turnaround in eastern Germany.²⁷ Thus the (ongoing) negative economic trend is not a sudden change for them, but at most a further deterioration of an already precarious situation. In addition, statistical arguments can also be made. First, the variation in the slope factor is very small, which makes it hard to find significant predictors for this effect. Second, the rate of agreement among respondents from eastern Germany at the starting point in 2002 was already so high that, due to the associated ceiling effect, a further increase was less likely. However, if the anomia level in the west rose more sharply in recent years, the question of the pattern of incidence arises again. Might some of the chosen characteristics not only affect the initial level but also the rate of change, but are relevant only for western or eastern German persons and were obscured by the previous composite model?

This assumption was tested separately for eastern and western German persons on the basis of a multiple group analysis. This makes it possible to examine whether there are interaction effects between predictors and belonging to east or west.

4.3. Determinants of Anomia Dynamics for Eastern and Western Germany

The model is supported by the empirical data, as is reflected in the global fit measures (χ^2 : 89.98; df = 58; CFI = .994; RMSEA = .014; p -close: 1.0). Table 6 shows that all sociodemographic variables had a significant effect on the initial level of anomia in 2002 in both western German and eastern German persons.

Table 6: Initial level of anomia by different determinants (West and East; b^* = standardized coefficients)

Effect of sociodemographic characteristics on the intercept (initial level) of anomia	West		East	
	b^*	p	b^*	p
High level of education	-.34	.001	-.34	.001
Age	.06	.045	.21	.001
Women	.14	.001	.13	.001
Left-wing/right-wing	.12	.001	.15	.001

Moreover, there are only minor differences in the strength of the effect of different predictors between the two sub-groups. Only in the case of age they are significant. (Although only the standardized coefficients are listed in the table, the finding that the strength of impact is similar also applies to the unstandardized effect coefficients that are not listed.) As regards age, the findings about strength of effect and level of significance indicate that this is a stronger explanatory factor in the east German sample. An additional χ^2 difference test showed that the strength of the effect of age differed significantly in the two sub-samples ($p < 0.05$). Accordingly, the initial level of anomia among eastern German persons in 2002 correlated more closely with age than was the case with the western German sub-sample. This can be explained by the more drastic changes that the older cohorts in eastern Germany had experience in previous years.

With the exception of the age effect in the eastern German sample, the explanatory power of the indicators included in the two sub-samples diverges insignificantly from the findings for the overall sample. Thus even when the two sub-groups are analyzed separately, educational level is by far the predictor with the greatest explanatory power.

²⁷ Negative consequences of the economic crisis situation, such as the extent of employment instability, continue in absolute terms to be more marked in eastern Germany (Struck and Köhler 2005; Grotheer et al. 2005; Abraham 2005).

A different picture emerges when the sociodemographic variables are compared in terms of their explanatory power for the rate of change (the slope factor) of anomia in eastern and western respondents. Table 7 shows the strength of effect and level of significance of our potential predictors. Apart from political orientation in the western German sample, none of the potential predictors reaches a significant level.

Table 7: Change in anomia by different determinants (West and East; b* = standardized coefficients)

Effect of sociodemographic characteristics on the slope (rate of change) of anomia	West		East	
	b*	p	b*	p
High level of education	-.06	n.s.	.03	n.s.
Age	.11	n.s.	-.18	n.s.
Women	-.02	n.s.	.19	n.s.
Left-wing/right-wing	.17	.038	-.31	n.s.

The effect of political orientation differs significantly in east and west. The level of anomie rose primarily among western German persons with right-wing political views. Thus Stolz's assumption (2000, 155ff.), based on a correlative finding, can be provisionally confirmed longitudinally, too, at least for the western German sub-sample. With reference to our chosen indicators, with the exception of the variable place of residence, little of the increase in individual experience of anomie between 2002 and 2004 can be explained by structural characteristics such as education, age and gender. In our analyses, individual attitudes, represented here by political orientation, seem to have greater explanatory power. Thus, the thesis that mainly people with few resources for coping with social transformation and the associated changes show greater anomic tendencies can only be upheld at the correlative level on the basis of our data. Whereas people with a low educational level, women, older people and people from eastern Germany are mainly the groups who are especially affected by, for instance, the negative consequences of making the labor market more flexible, the discrepancy experiences of persons with right-wing political views are not necessarily at the level of structural disadvantage. The assumption that persons with right-wing political views also possess fewer coping strate-

gies may be right. However, it seems equally plausible that the higher level of anomie emanates from the discrepancy between the values associated with their political views, such as keeping up traditions, demanding ethnic homogeneity, a clear order, etc., and social trends. The changes in society run contrary to their own personal views, which is not necessarily an actual disadvantage. Still, this correlation applies only to persons with right-wing political views. The findings of the analysis conducted by Schlüter et al. (2006) point in the same direction. In the context of a cross-lagged panel analysis, the authors found that authoritarian views associated with a right-wing attitude have a positive impact on the level of anomia.

Against the background of these findings and with reference to Merton's modes of adaptation typology, one can expect that those who are affected will show rebellion-type adaptation rather than innovation-type adaptation. Studies have shown that persons with right-wing political views are not only more likely to tolerate the use of illegitimate means (e.g. violence and discrimination towards certain groups such as political dissidents, immigrants, homosexuals, etc.) within a democratically constituted society, but also reject culturally determined goals and strive instead to create a new social order (Merton 1968, 310).

Thus our findings provide no support for the compensation hypothesis, according to which uncertainties of action and orientation can be offset by turning to right-wing (or right-wing extremist) attitudes (Parsons 1942; Heitmeyer 1997; Böhnisch 1994) or for the wealth of empirical evidence for it based on cross-sectional data (Fuchs 2003; Hüpping 2006). Our analyses show, however, that a higher initial level of anomia was observed in persons with a right-wing political orientation, and that the level of anomia rose significantly faster during the period from 2002 to 2004 among this group - but only in western Germany.

5. Summary and Discussion

Anomia, measured in terms of cognitive uncertainty of orientation and action, is not only verifiable in large sections of the population, but also increased significantly between 2002 and 2004. Our findings show that the initial level of anomia is connected to a not insignificant extent with

diverse sociodemographic characteristics. The strongest predictor is the level of education. This finding is contrary to views that the significance of socioeconomic factors in explaining individual experience of anomie is declining. Not only is educational level still a crucial indicator for determining socioeconomic position,²⁸ but it also plays an important role in dealing with complexity, the utilization of options, and risk limitation. Although its role as a guarantor of employment stability during the course of social (crisis) developments has been restricted, it is still a fundamental prerequisite (e.g. Abraham 2005, 122).

In addition to educational level, regional origin also has an explanatory component, inasmuch as eastern German persons showed a higher initial level of anomia in 2002. The effects for age, gender, and political orientation are seen to a somewhat lesser degree. Women, older people and those with right-wing political views were more anomic in 2002. However, the data did not support our assumption that young people in particular increasingly react to growing, diverse demands with anomia. This could be because younger age cohorts possess different coping strategies, e.g. as regards expectations, for reacting to the change in general conditions such as “the right to discontinuous employment” (Beck 1999, 33).

We also found in our analyses that although anomia has risen, it has not done so in equal measure across all respondents. Our determinants, with the exception of inner-German origin, have no explanatory power in respect of the increase in anomia. Surprising in this context is the finding that it is not belonging to the east, but rather to the west, that has an effect on the increase in individual experience of anomia. Although the absolute level of anomia was more pronounced among respondents in eastern Germany in both 2002 and 2004, in relative terms there was a sharper increase among the western German population during this

period. A separate analysis of east and west by means of a multiple group comparison produced two further findings about the comparative explanatory power of the characteristics included for the initial level and development of anomia in persons in eastern and western Germany. In the eastern German sample, age was a stronger factor influencing the initial level of anomia. Evidently, the fundamental, all-round changes in the general conditions of life in eastern Germany after the disintegration of the East German state (Diewald et al. 1996, 219) and the associated life experiences before and after reunification helped to increase uncertainty of orientation and action. Apart from age, there were no significant differences between the two sub-samples with respect to the impact of gender, educational level, or political views on the initial level of anomia.

A second finding that had been obscured by the all-German analysis relates to the development of anomia over time. Here, only a right-wing political orientation has a significant influence on the increase in individual experience of anomia, and then only in the western German sample. Thus, West-German persons with right-wing political views in particular have become more anomic over time. Therefore not only does a right-wing political attitude lead to a search for individually new patterns of orientation and structuring, but these in turn may trigger individual experience of anomie. This finding is new and runs contrary to previous patterns of interpretation that saw right-wing political attitudes as an anomic reaction. In terms of Merton’s adaptation typology one can in this case anticipate rebellion whereby those affected reject culturally determined goals and the means at their disposal in a (democratically constituted) society and aspire to a new social order instead.

Moreover, our finding can also be arranged as a supplement so as to permit one to “make a synthesis of Durkheim’s and

²⁸ An additional analysis taking employment status into account also showed nonemployment among respondents in the eastern German sub-sample to have had a positive effect on the level of anomia in 2002 ($b = .141$; $\text{sig.} = .001$). Its effect on the growth factor, in contrast, was significant in neither the

overall sample nor the two sub-samples. This finding must, however, be interpreted with caution inasmuch as the nonemployed included not only unemployed people but also pensioners, trainees, housewives, etc. At the same time this finding is an important additional factor. Employment thus seems

for the eastern German sub-sample to have an integrative and regulative force that impedes action and orientation uncertainties. Regardless of the nature of nonemployment, in contrast, nonintegration in labor market structures increases the level of anomia.

Merton's trains of thought and erect a theory that includes processes of social change that induce anomie, which in turn could lead to further social change" (Passas 2000, 104).

Summing up, one can thus state that sociodemographic characteristics, first and foremost educational level, are strong explanatory factors for the initial level of anomia, as various trend analyses have shown previously. However, apart from regional origin, broken down into east and west, they are not significant predictors for explaining the increase in individual experience of anomie. Along with political orientation there are obviously other influencing factors that we did not take into account. However, it is impossible to say on the basis of existing data whether these findings will have any long-term validity. In terms of research, it would be desirable to realize longitudinal studies over longer periods so as to identify structural effects on individual attitudes and behaviors with a higher degree of reliability.

In addition, future research should examine the significance of value orientation (Schwartz 1992) in explaining the level and development of anomia. In this connection, one must assume that values such as stimulation and self-direction tend to have a negative effect on the initial level and development of anomia, while security, conformity and tradition tend to bring about positive effects. This supplementary investigation would also permit more precise conclusions about the effects of political attitude.

It would also be desirable to examine the extent to which anxiety about loss of social standing and growing job insecurity can explain the extent and development of the individual experience of anomia (Dörre 2007). Although these still correlate with socioeconomic position, the correlation has become less clear. Fears of loss of social standing, and a growing job insecurity, affect all status groups. Nowadays, everyone is called on to adapt to changing social conditions (Ehrenberg 2003, 222).

Finally, one has to analyze the relationship between the cognitive and normative dimensions of anomia in more detail. For this purpose, longitudinal data are needed to find out more about their potential causal relationship.

"Thus it would be counterproductive to regard the causes of anomie as identical at all times and in different places and to limit the search for anomie-inducing factors to the seemingly universal. The very fact that the concept lends itself to different hypotheses—depending on historical circumstances and the field or analysis level to which it is applied—makes it so useful and strong" (Passas 2000, 107). In addition to searching for further individual factors, it would also be desirable to supplement longitudinal data by macro-indicators. This would simultaneously provide the opportunity to test explicitly the relationship between anomie and anomia that we assume.

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Is the Market Eroding Moral Norms? A Micro-analytical Validation of Some Ideas of Anomie Theory

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Is the Market Eroding Moral Norms? A Micro-analytical Validation of Some Ideas of Anomie Theory

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Anomie theorists have been reporting the suppression of shared welfare orientations by the overwhelming dominance of economic values within capitalist societies since before the outset of neoliberalism debate. Obligations concerning common welfare are more and more often subordinated to the overarching aim of realizing economic success goals. This should be especially valid with for social life in contemporary market societies. This empirical investigation examines the extent to which market imperatives and values of the societal community are anchored within the normative orientations of market actors. Special attention is paid to whether the shape of these normative orientations varies with respect to the degree of market inclusion. Empirical analyses, based on the data of a standardized written survey within the German working population carried out in 2002, show that different types of normative orientation can be distinguished among market actors. These types are quite similar to the well-known types of anomic adaptation developed by Robert K. Merton in “Social Structure and Anomie” and are externally valid with respect to the prediction of different forms of economic crime. Further analyses show that the type of normative orientation actors adopt within everyday life depends on the degree of market inclusion. Confirming anomie theory, it is shown that the individual willingness to subordinate matters of common welfare to the aim of economic success—radical market activism—gets stronger the more actors are included in the market sphere. Finally, the relevance of reported findings for the explanation of violent behavior, especially with view to varieties of corporate violence, is discussed.

1. Outline of the Problem

This study is concerned with the impact of market structures on actors’ norm-related orientations and actions. It thus joins a debate, termed the “market and morality debate” by Albert O. Hirschman (1986, 105ff.), whose central question is to what extent the market as a system of social institutions contributes to a strengthening or a weakening of the moral order of a society. According to Hirschman, the main positions in the market and morality debate are those of advocates and critics of a liberal market system. Whereas the former, ever since Montesquieu (1689–1755) and Hume (1711–1776), have put their faith in the disciplining and civilizing power of the market, the opposing camp, certainly since the publication of Marx and Engels’s

Communist Manifesto (1983 [1848]), has cited the processes of normative and moral erosion that the market system triggers in social life.

From the very outset, anomie theory, with its structural perspective, has taken a skeptical view of the relationship between the market and morality. Derived from the Greek *a* = without + *nomos* = law or rule, the term has generally been used to describe a state in which social norms or rules are absent from social life (Mestrovic and Brown 1985, 81ff.). Historically the concept of anomie is associated primarily with Emile Durkheim (1858–1917) and his analysis of the societal impact of early industrialization in France (Durkheim 1992, 42ff, 437, 480; 1983, 273ff., 291f.).¹ Both in his book on

¹ Orru (1983), however, points out that Durkheim actually borrowed his concept of anomie from the French social philosopher

Jean Marie Guyau and changed its meaning in the process (Orru 1983, 499ff.).

the division of labor (1992 [1893, 1902]) and in his study of suicide (1993 [1897]) Durkheim repeatedly focuses his critical attention on the intrinsically expansionary nature of early market industrialization and its external effects. In Durkheim's view, industrialization had increasingly led to a decline of "public morality" in social life and given rise to an "idolization of wealth" (1983, 292) in all spheres of life. He believed that growing sectors of the population spent their lives almost entirely in an industrial and commercial milieu, and that it therefore followed that because their milieu is shaped only to a weak extent by morality, the greater part of their existence takes place outside any kind of moral activity (1992, 44).

Interestingly enough, observations similar to Durkheim's have also been made by contemporary sociologists (for example, Bellah et. al. 1992, Neckel 2000). The general view is that in Western capitalist countries a transition has taken place since the 1980s in the way society is shaped, from a modern industrialized society to a post-industrial market society (for example, Currie 1990, 1997). In a manner akin to Durkheim's description of industrialization, market societies are defined as societies "in which market principles, instead of being confined to some parts of the *economy*, and appropriately buffered and restrained by other social institutions, come to suffuse the whole social fabric" (Currie 1997, 152). What is qualitatively new about the post-industrial society, Currie says, is that here an aggressive materialist individualism characterized by a ruthless striving for economic success and a permanent awareness of competition has become common cultural property (Currie 1997, 161ff.; also Taylor 1999, 61ff.). In a similar vein Susanne Karstedt (1999, 2004; Karstedt and Farrall 2007) states that the structural development trends of markets in contemporary Western societies, conditioned not least by globalization and neo-liberal deregulation policies, have recently led to a sweeping change in the moral economy of these societies (Karstedt and Farrall 2007, 2, 4). In terms of the orientations informing individual behavior, this change finds expres-

sion in an erosion of legal and moral norms as well as in a decline in social trust both in institutions and in interpersonal relations (5). It is thus not surprising that Karstedt and Farrall also describe this state as anomic, introducing the specific term market anomie (5, 6, 7).

If we apply this diagnosis to the relationship between the market and the community, the implication is that the imperatives of economic activity—above all in the context of market activity, but also in traditional areas of non-economic activity—will increasingly "erode" and suppress formal norms of criminal law and informal rules of fair play. Similar observations can be found in the work of various writers on legal and criminal sociology in the field of anomie theory. These will be addressed only briefly here, however. If we look at the last two decades we find such authors as James W. Coleman (1987, 406ff.; 2002, 188ff.) or Elliott Currie (1997, 152; 1998, 133f.). More recently similar theses have been expounded in the publications of Messner (2003), Messner and Rosenfeld (1997, 2000), Karstedt (1999, 2004), and Karstedt and Farrall (2007). A problematic aspect of these studies is that they look at the relationship between the market and morality chiefly on the macro-analytical level in terms of social change processes. The thesis on which their arguments are based, namely, that the increasing dominance of the market is bringing about an erosion of actors' normative and moral commitment, has to date never been explicitly subjected to a micro-analytical examination.

The current study therefore aims to fill a gap in the research literature. Specifically it examines to what extent behavioral imperatives, which are communicated to members of a society on the one hand via the market and on the other by the social community, are anchored in the norm-related orientations of social actors. The study focuses particularly on the question of what forms of norm-related orientations and behavior distinguish actors who are gradually and to varying degrees becoming more involved in the market—

¹ Like Currie, Taylor (1999, 52) characterizes a market society as a society "in which everything

(from consumer goods to public good[s], like health or educational opportunity) is for sale."

in other words, actors whose everyday life is dominated to varying extents by market conditions and market developments. The main question in this context is to what extent empirical support is found for the thesis that orientations based on legal norms and the rules of fair play are being suppressed and eroded by the behavioral imperatives of the economy among strongly market-oriented actors.

2. The Theoretical Framework

The theoretical starting point of the study is the assumption drawn from differentiation theory that actors always operate in a framework of competing social order systems. Kaufmann (1983, 474ff.) and also Streeck and Schmitter (1985, 119ff.) identify central order systems as being the community, the state or law, and the market, each of which has its own guiding principles of informal control as well as, in the case of the community, spontaneous solidarity; in the case of the law, hierarchical control combined with the threat of sanctions of various kinds and a belief in the legitimacy of the prevailing order (Weber 1980 [1921], 16ff.); and in the case of the market, free competition linked to the ultimate goal of maximizing profit (see Figure 1).⁴

Figure 1: Systems of social order, system-specific guiding principles, and norm-related orientations

Order system	Guiding principles	Norm-related orientations
Community	Informal control, spontaneous solidarity	Communitarianism
State/law	Hierarchical control (threat of sanctions), belief in legitimacy	Nomocentrism
Market	Free competition, profit maximization	Economism

³ By market involvement or inclusion we mean here the degree of proximity of actors' everyday decision-making to entrepreneurial decisions or to factors influencing the flow of payments, which according to Luhmann constitute the economic system and the market economy, respectively (Luhmann 1999, 52ff.).

⁴ The term law refers here and in the following primarily to the field of repressive or criminal law.

⁵ Here the concept of communitarianism serves exclusively to denote a positive communitarian

orientation, and ignores its more complex roots in the social theory of Michael Sandel (1982), Charles Taylor (1985a; 1985b; 1993), Alasdair MacIntyre (1987), Amitai Etzioni (1988; 1998), and others.

⁶ The term nomocentrism is taken from the work of Speyer-based values researcher Helmut Klages (1988, 64ff.). It is used in the context of the value shift from primarily nomocentric to primarily autocentric values that he identified as having taken place in Germany during the 1970s

and 1980s. According to Klages nomocentrism means a stronger orientation towards the values of obligation and acceptance. The concept is based on an authoritarian understanding of norms.

⁷ This conceptualization of the market as a normative system is modeled on Max Weber's description of the capitalist economic order in "Protestant Ethics" (Weber 1988 [1905], 37).

Inspired by Parsons's concept of the control hierarchy (Parsons 1983, 157ff.; see also Turner 1991, 65) we assume that the community, the law, and the market guide and regulate the actions of individuals at different levels simultaneously by generating norm-related orientations. Thus via the guiding principles of informal control and spontaneous solidarity the community generates communitarian orientations, here termed communitarianism (Latin: *communitas* = the community).⁵ By defining criminal offences and the associated sanctions the law—in particular criminal law—generates orientations based on legal norms, here labelled nomocentrism (Greek: *nomos* = the law).⁶ Finally the market, via its guiding principles of free competition and profit maximization, generates economic orientations or rather a commitment to achieving economic goals, here referred to as economism, among social actors.

In this study the order system of the market will be conceptualized as a normative system just like the community and the law. The study therefore assumes that both in the field of employment and in other areas of the market individuals will be confronted with the principles of free competition and profit maximization as valid norms and will thus be urged to realize their advantages if they are not to be excluded from competition—in other words, to behave in a market-conformist manner.⁷ What is meant here by market-conformist behavior is, in the event of conflicting goals, giving priority to the economic principle of profit maximization, ahead of other principles like altruistic interests, charitable goals, or even legal stipulations.

It should be noted that there is a certain amount of tension between the various norm-related orientations. Indeed, for certain periods of time and in certain situations they may enter into competition with one another. There are, for instance, situations in which the economic imperative to

“make a profit” contradicts legal norms, for example when a legal ban on insider trading or bribery prevents individuals from realizing their economic advantage. What is more, the central imperative of making a profit may also be at odds with the moral requirements and obligations of a social community, as, for example, when profits are achieved legally but at the expense of the common good.

With regard to norm-related orientations the study further assumes that these are not uniformly strong among all members of society. Rather a central assumption from which the research for the current study proceeds is that, depending on the social position of the actors—within social structures in general and with respect to market activity in particular—the strength of these orientations will vary. Our thesis is, therefore, that under the specific influence of each of the order systems—community, law, and the market—actors in different social positions will form a specific normative habitus with respect to each of the different norm-related orientations, which will determine their attitude to the legitimacy of formal legal and informal community norms on a day-to-day basis. The more strongly involved actors are in market structures, so the theory goes, the more pressure they will feel to be successful and to compete and the more the legitimacy of the normative expectations of the community and the law will be subjugated to the imperative of economic utility and the personal success and competitive orientation associated with it.

On the basis of these theoretical considerations the study investigated the following research questions:

- (1) What profiles or patterns of nomocentric, economic and communitarian orientations can be distinguished among the population?
- (2) Is there a connection between the orientation patterns of actors and their willingness to realize their own advantage by illegal or illegitimate means?

- (3) Is there a connection between degree of involvement in the market and actors’ norm-related orientations?

3. Data and Methodology

In order to answer the research questions a standardized written survey of members of the working population was carried out in 2002 using a cross-sectional design. The study subjects were students and teachers at various adult education institutions in North Rhine-Westphalia. Around 1,200 questionnaires were distributed and 440 were returned completed, equivalent to a response rate of about 37 percent. Finally 390 of the completed questionnaires were judged to be valid and suitable for further analysis. It should be noted that the empirical investigation was organized as a pilot study, so the participants were not a representative random sample.⁸

As far as possible the concept of actors’ norm-related orientations was operationalized using tested opinion survey instruments and items. In order to ascertain their *nomocentric orientations*, respondents were presented with the following items and asked to say whether they agreed or disagreed with them:

1. “It is important to respect law and order.” (r=0.70)⁹
2. “You should obey laws even if you don’t agree with them.”(r=0.78)
3. “Laws are only made for worst-case scenarios. So in everyday life it is not really important to obey every law.” (r=0.79)
4. “There are some unjust laws that you don’t have to obey.” (r=0.79)

Respondents were asked to rate Item 1 on a seven-point scale, ranging from (1) Not important to (7) Extremely important. Agreement or disagreement with Items 2 to 4 was expressed on a four-point scale with the options: (1) Disagree completely, (2) Tend to disagree, (3) Tend to agree, and (4) Agree completely. Principal components analy-

⁸ For reasons of space a description of the survey methods and random study sample were omitted here. A more detailed account of the methodology and data of our study can be found in Burkatzki 2007, 69ff., 304ff.

⁹ Here and in the following, the r-coefficient designates the item loadings in relation to the principal component.

sis confirms that the items selected for the nomocentric orientations are based on a one-dimensional structure.¹⁰ The extracted components alone explain 60.1 percent of the variation in the underlying indicator variables.

For *economic orientations* two items were used to establish the subjective relevance of advancement goals and profit opportunities in the labor and financial markets: “If you think about what means a lot for you in your private life and at work, how important are the following things?” The respondents were given the following statements to evaluate:

1. “To make use of opportunities for advancement and promotion.” ($r=0.64$)
2. “To realize big returns from capital and investment deals.” ($r=0.75$)

The respondents were asked to evaluate these items on a four-point scale with the options: (1) Very important, (2) Quite important, (3) Not very important, and (4) Not important at all.

To find out how committed the respondents were to economic goals they were asked a further question: “People who are active in economic life often receive varying amounts of recognition among the population. We are interested in what attitude you personally have to the following groups. In your view do the members of these groups deserve a high, medium, or low degree of recognition?” Here the respondents were asked to evaluate the following two items:

1. “People who have made a lot of money by buying and selling shares.” ($r=0.75$)
2. “People who borrow money with the explicit purpose of getting tax breaks.” ($r=0.62$)

Respondents were asked to evaluate these items on a three-point scale: (1) A high degree of recognition, (2) A medium degree of recognition, and (3) A low degree of recognition.

All the items were recoded to represent a positive commitment to economic goals. In this case, too, principal component analysis shows that the items are based on a one-dimensional structure. Although at 47.6 percent not fully satisfactory, the share of the variation explained by the principal components is tolerable.

The concept of *community orientations* was used to find out to what extent people felt committed to personal norms of altruism, solidarity, and reciprocity. As a reference point we used Steenbergen’s ANES Humanitarianism Scale (1999). For the purposes of our study the following two items were selected from Steenbergen’s original scale:

1. “One should always look for ways to help others who are less fortunate than oneself.” ($r=0.74$)
2. “A person should always endeavor to ensure the well-being of others.” ($r=0.73$)

The following items were added to the scale.

3. “The common interest comes before personal interest.” ($r=0.66$)
4. “The dignity of the individual and the well-being of all should be the most important thing in any society.” ($r=-0.65$)
5. “I always think of myself first without much consideration for others.” ($r=0.58$)

Respondents were asked to evaluate these on a four-point scale: (1) Disagree completely, (2) Tend to disagree, (3) Tend to agree, and (4) Agree completely. Here, too, principal component analysis confirms that the item is based on a one-dimensional structure. At 45.4 percent the share of the variation that can be explained by the principal components also seems to be tolerable.

4. Findings

4.1 Norm-related Orientation Patterns

In order to answer the first research question the combined values for nomocentric, economic, and communitarian

¹⁰ Principal component analysis is a multivariate method of data analysis, which aims to order a large number of variables into a few groups of largely independent variables according to their relative relationships (Bortz 1999, 495ff.). If we use a

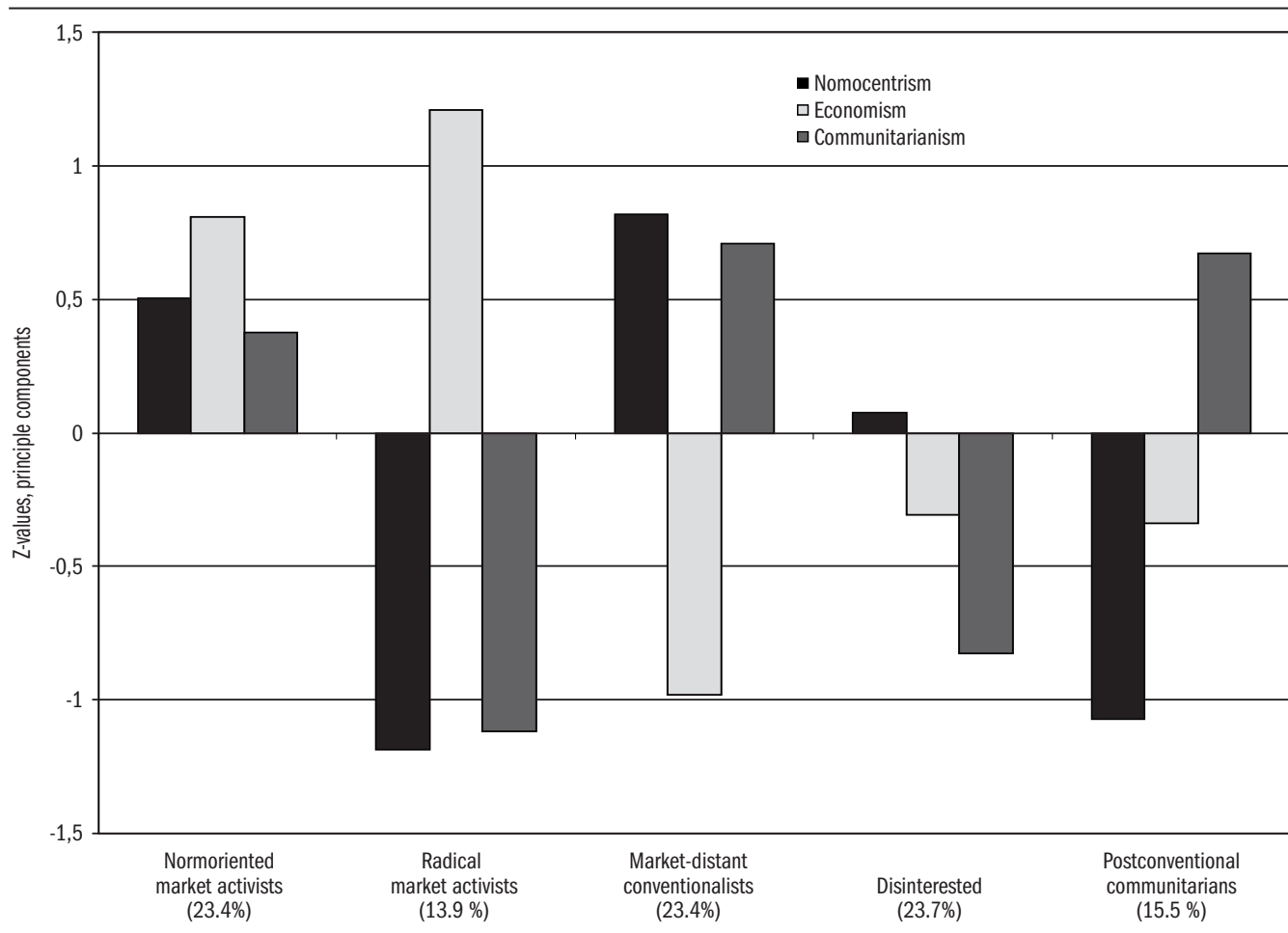
geometric model to illustrate this method, it can be described as the projection of a p -dimensional space defined by the number of output variables onto a smaller subspace with m axes (the principal components). Analogous to their scores on

the output variables each respondent is allocated principal component values for each of the m principal components. The principal component values correspond with the specific profiles of the respondents on the output variables of the analysis.

orientations were investigated using cluster analysis.¹¹ The various main dimensions of the norm-related orientations served as classification variables for the analysis. The starting point was the scores of the respondents on the various principal components. The cluster technique was used in order to obtain an empirically founded typology for the

norm-related orientation patterns of actors. On the basis of the available formal statistical selection criteria—given the fundamental classification variables—this procedure yielded a five-cluster solution as the best model for describing norm-related orientation patterns in the random sample.¹²

Figure 2: Cluster types for patterns of nomocentric, economic, and communitarian orientation among the German working population (n=367)



Source: *Wirtschaft und Ethik*, 2002.

¹¹ Cluster analysis is a method of statistical analysis used to classify objects, which aims to group the elements of a set—in our case the units of a random sample—according to points of similarity vis-à-vis pre-selected classification features. For the purpose of this study hierarchical cluster analyses after Ward and using k-means were performed

consecutively. For an introduction to cluster analysis we refer the reader to Bortz (1999, 547ff.), Bacher (1996), Bailey (1996), and Gordon (1999).

¹² In the context of hierarchical cluster analysis PRE statistics and the F-Max value were used alongside dendrogram and structogram analyses as reference points for model selection (Bortz 1999, 559f.; Bacher 1996, 316ff.). A detailed description of the process of model selection used in the current study can be found in Burkatzki 2007, 312ff., 315ff..

Figure 2 shows the mean values for nomocentric, economic, and communitarian orientations in the various clusters as deviations from the respective mean value for that orientation for the random sample as a whole (represented by the horizontal axis).¹³ The typology of norm-related orientation patterns is determined by the combined values for the orientation variables in the clusters. In order to distinguish the orientation types linguistically, each was given an appropriate label that summed up the particular type of orientation.

The label “norm-oriented market activist” was used in the cluster typology to denote an orientation pattern characterized by a strong commitment to economic success combined with an above-average orientation toward legal norms and communitarian values. The “norm-oriented market activist” is an actor whose behavior is oriented toward economic success, but who lets himself be restrained by legal imperatives and communitarian obligations. In this respect the term describes the ideal type of an actor who seems to have internalized the classical entrepreneurial ethics of republican virtue and social responsibility.

More or less as the counter-model to the “norm-oriented market activist” we find in the cluster typology the “radical market activist.” This type is likewise characterized by a very strong, above-average commitment to economic success, but in this case the orientations related to legal norms and communitarian obligations are very much weaker than average. In our typology the “radical market activist” represents the type of actor who puts the legitimacy of formal legal and communitarian values decisively and radically below the importance of realizing his market interests. The orientation profile of the “radical market activist” strongly suggests that people of this type have an anomic attitude to norms, associated with a raised tendency to use illegal and illegitimate means to gain advantages.

In our typology the complementary type to the “radical market activist” is the “market-distant conventionalist.” This type is characterized by a very strongly above average orientation toward legal and communitarian norms, while his commitment to economic success is well below average. In this respect the “market-distant conventionalist” resembles the “order-loving conventionalist” in the Speyer value typology conceived by Helmut Klages and his fellow researchers (Klages 1996, 78ff.; Gensicke 1998; Klages and Gensicke 1999, 63ff.).

A further orientation pattern to emerge from the cluster analysis is characterized by a below average communitarian orientation, a slightly below average commitment to economic success, and parallel to this an average to slightly above average orientation toward legal norms. Apart from a strong tendency to distance himself from communitarian obligations, this type does not reveal any clear priority structure. What is apparent is that the members of this cluster tend to isolate themselves both from the efficiency and profitability requirements of the market and to a great extent from the community as well. The anti-communitarian sentiments of this type of actor together with a tendency toward disinterest in economic goals led us to label the members of this cluster “disinterested.”

Finally, the contrasting type to the orientation pattern “disinterested” is the “post-conventional communitarian,” who is characterized primarily by a strongly above-average community orientation combined with a strongly below-average orientation to formal legal norms.¹⁴ In this case commitment to the order system of a social community is paired with a very distanced attitude to legal requirements, which in practice implies a willingness to treat legal norms in a rather unconventional fashion. For this orientation type the

¹³ The specific reference point here is the arithmetical mean of the various cluster populations on the level of z-standardized principal component values for the nomocentric, economic, and communitarian orientations.

¹⁴ Semantically the term “post-conventional” is based on Kohlberg’s theory of a post-conventional stage of moral development (Kohlberg and Althof 1996: 135ff.), without, however, in this case assuming an ontogenetic model of moral development. This label is simply used to emphasize that this orientation type adheres to norms or conventions

not because of their procedural legitimacy and authority, but instead examines the legitimacy of norm prescriptions with respect to how universally they can be applied for the benefit of the common good and with respect to the expected consequences of a deviation from these norms under the conditions of a given situation.

criterion for adhering to legal norms is the extent to which a violation of these norms harms the collective common good in a given situation. Blind obedience to legal norms divorced from a subjective evaluation of the consequences for the common good in a given situation can therefore not be expected from the “post-conventional communitarian.”¹⁵

It remains to be said that norm-related orientations among the types described—although obtained by empirical inductive means—are in fact exaggerated ideals of real orientation profiles, designed to contrast with one another and which in the context of the present study have primarily a heuristic and ordering function.

It should also be stated that the typology presented here, though derived in a different context, has certain unmistakable analogies with Merton’s typology of individual forms of adaptation (Merton 1995 [1957], 135ff. and 169ff.). Merton constructed a typology of individual forms of adaptation by combining the differing degrees of acceptance of a society’s economic goals and its institutionally legitimized means of achieving these goals. Merton’s scale of acceptance of economic goals can be compared with the degree of orientation toward economic advancement and profit measured in the current study, while his acceptance of institutionalized means of achieving these goals can be compared with the extent of orientation toward formal legal norms or a general acceptance of the law. It is interesting that Merton, too, distinguished between five forms of adaptation. The norm-oriented market activist from our study thus corresponds with Merton’s conformist (Merton 1995, 136). The radical market activist, on the other hand, corresponds with the type that Merton calls the innovator, who pursues the economic goals of a society but is also prepared to use non-institutionalized, illegitimate means to achieve these goals (136ff. and 169ff.). The market-distant conventionalist is the equivalent of

Merton’s ritualist, who is committed to a society’s institutional means but in so doing relinquishes economic goals (144ff. and 176ff.). To continue the analogy, the disinterested type partially resembles Merton’s retreatist, who is the type of person who rejects the declared goals of a society and no longer has much respect for institutionalized means (147ff. and 179ff.). The post-conventional communitarian, finally, resembles to some extent Merton’s rebel, who regards the underlying legitimacy structure of cultural goals and the institutionalized means of a society as arbitrary notions and counters these with his or her own order system (150f. and 181ff.).

Here it should be emphasized that—unlike the typology of the current study—Merton’s typology originated in the context of a systematic analysis of ends-means discrepancies, with which actors occupying different positions in the social structure are confronted to differing extents (135). The typology of the current study, by contrast, is based not on an analysis of ends-means discrepancies, but on an empirical reconstruction of norm-related orientations toward the imperatives and demands of the social order systems of the state or the law, the market, and the community. At the same time, the pattern of acceptance or rejection of socially dominant economic goals and rejection or advocacy of legitimate means developed by Merton can be transposed into a framework that corresponds with the comparison undertaken here of differing degrees of nomocentric or economic orientation. And it is precisely in this sense that Merton’s innovator can be compared with the radical market activist, or his ritualist with the market-distant conventionalist: namely, as a pattern of norm-related orientations that is structurally analogous.

This implies that the structural similarities identified between our typology of norm-related orientation patterns

¹⁵ In the way that post-conventional communitarians order their priorities an orientation pattern emerges that the legal sociologist Doris Lucke (1995, 1996) may have had in mind when she noted a change in the “acceptance culture” and in this context proclaimed the “end of homo legalis.” Particularly in the context of the debate

on the erosion of norms (Frommel and Gessner 1996) she constructed as a counter-type a post-conventional actor, who always questions the legitimacy of legal norms in a given situation and in cases of perceived legitimacy deficits takes the liberty of choosing not to adhere to norms.

and Merton's typology of individual forms of adaptation do not mean that the various types are exactly equivalent. One major difference between them is the fact that the current study, alongside the general acceptance of legal norms and the commitment to economic goals, also takes explicit account of the communitarian orientations of actors as an orientation dimension for distinguishing between norm-related orientation patterns. This is of particular interest in cases—like that of the non-conformist communitarian—where a rejection of the formal legal norms is associated with a strong communitarian orientation.

4.2 Norm-related Orientation Patterns and Willingness to use Illegal Means for Personal Gain

The answer to the second research question, which concerned the connection between norm-related orientation patterns of actors and their willingness to use illegal means for personal gain, was obtained by looking at the responses to the questions about how willing participants were to commit various instrumental property offences, and how frequently they had done so. In terms of methodology the study borrowed methods used in criminology to study unreported crime.¹⁶ Respondents were asked—after being given express assurance that their responses remain anonymous—whether they would commit various types of offences if there were only a small chance of being found out. Here we used the vignette technique: respondents were presented with a scenario that involved a decision-making

dilemma and they were asked how they would decide if they were in this situation.¹⁷

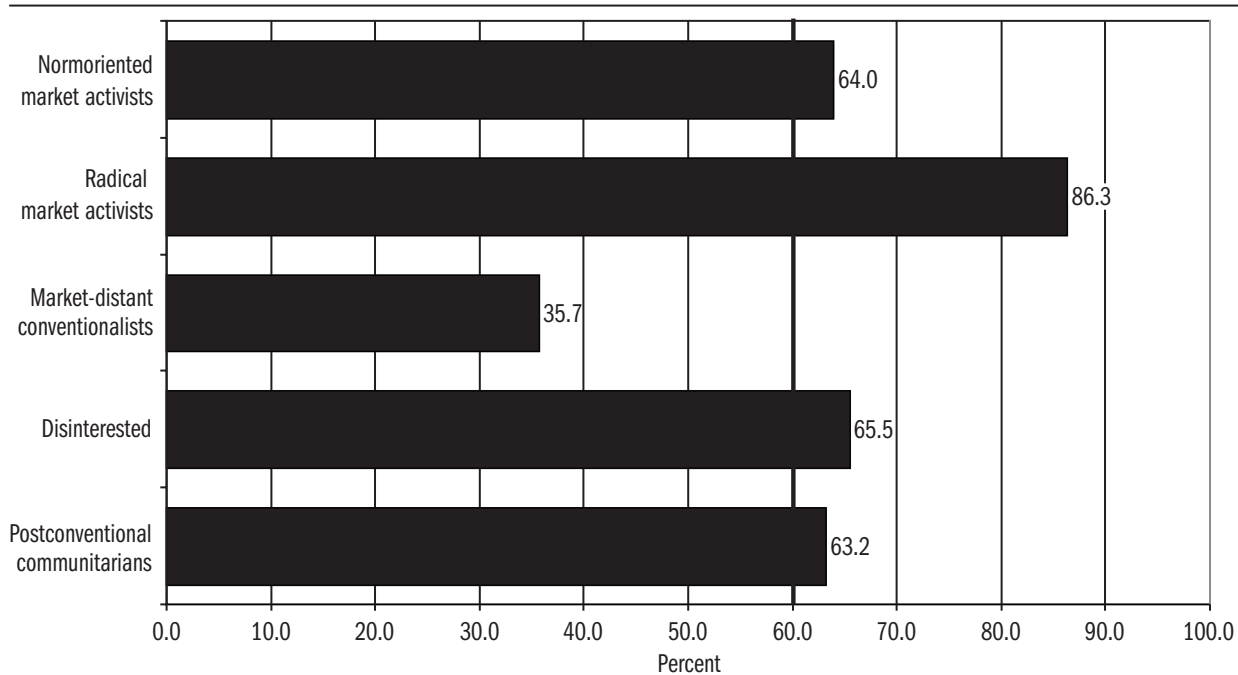
In a vignette on willingness to engage in criminal offences respondents were asked to imagine that they were employees of a pharmaceutical company that had recently gone public. They were told the following: The company is working on a new anti-cancer drug and you have been informed by a confidential source that the results of the latest drug trials are positive. You also know that when this news is published in the next few days the value of the company's shares will jump and may even double. In this situation you think about buying more of the company's shares before the positive results are published. The investment sum named is 15,000 euros. You know that if you were to buy the shares you would be committing a punishable offence, since you would be buying shares using information that at this point is not accessible to other shareholders outside the company. Nevertheless, no-one can really prove that at the time you bought the shares you knew about the positive results of the trials for the new anti-cancer drug.

After having this vignette presented to them the respondents were asked to say how probable it was in such a situation that they would buy additional shares prior to publication of the test results. Their responses were graded on a scale consisting of four categories: (1) Very unlikely, (2) Rather unlikely, (3) Rather likely, and (4) Very likely.

¹⁶ On this method of criminological research see, for example Kaiser (1993, 220ff.).

¹⁷ The vignette has recently been used for the empirical investigation of social norms and norm-led behavior (see, for instance, Jasso and Opp 1997; Beck and Opp 2001).

Figure 3: Willingness to engage in illegal share-buying given a hypothetical opportunity for insider trading, differentiated according to membership of clusters (n=365)



Cramer's $V=0.320$; $p<0.001$.

Note: for the purposes of analysis the responses were divided into just two categories. The graphic shows the proportion of respondents who answered the question of whether they would buy shares before publication of the positive results with either "rather likely" or "very likely." The black vertical line in the graphic marks the proportion of persons from the random survey sample who answered the question with either "rather likely" or "very likely."

Source: *Wirtschaft und Ethik*, 2002.

The responses to this question show that 60 percent of all respondents believe that it is rather or very likely that they would buy additional shares illegally. As Figure 3 shows, there are significant differences between the different norm-related orientation types in their degree of willingness to commit a criminal offence. The greatest willingness to buy shares illegally is shown by the radical market activists. The high proportion of respondents with a greater willingness to commit a criminal offence (at 86 percent well above average) shows that—as expected—when people with a strong economic commitment combined with weak nomocentric and communitarian orientations have to decide between

the interests of economic gain on the one hand and the legitimacy of legal norms on the other, they tend to decide in favor of economic gain.¹⁸ This stands in contrast to the well below average willingness of the market-distant conventionalists to commit a criminal offence. Nevertheless, even in this group the proportion of people prepared to commit a criminal offence is still almost 36 percent. This illustrates on the one hand that when faced with a very favorable and financially attractive opportunity even actors with a strong commitment to norms develop a willingness to violate normative prescriptions. In other words, a greater commitment to the law and to the common good seems only to have a

¹⁸ This finding is also confirmed by a linear regression analysis of willingness to engage in illegal share-buying on the nomocentric, economic

and communitarian orientations of the respondents (Burkatzki 2007, 157ff.). Here significant positive effects of nomocentric and communitarian

orientations on the willingness to commit a criminal offence and a significant negative effect of the economic orientation were found.

moderating influence on individual willingness to commit a criminal offence. On the other hand, recognition of the legitimacy of state laws—as expressed in the nomocentric orientations of actors—and a strong commitment to communitarian values still seem to reduce willingness to use illegal means for personal gain. This view is also supported by the “only” average degree of willingness—by comparison with radical market activists—of the norm-oriented market activists and the post-conventional communitarians to commit a criminal offence. The degree of willingness to commit a criminal offence of the disinterested, also average, indicates that this type—despite their below average commitment to economic goals—would not pass up the chance of an easy opportunity for economic gain, especially since here communitarian commitments do not play a restricting role.

At the same time it would be wrong on the basis of a fictitious scenario to draw direct conclusions about actors’ real willingness to commit a criminal offence. For committing criminal offences also depends on other factors aside from norm-related orientations, such as the motivation to commit an offence, as well as on being given and making use of opportunities to engage in criminal acts (Lamnek 2001, 13ff.). It is, however, interesting to observe in this context that the findings on the relative willingness of the different orientation types to commit a criminal offence obtained using the vignette can be partially confirmed by the self-reported frequency of economic crime. As part of the survey respondents were also asked to say how often they had committed various low-level economic offences during the previous five years. This included offences such as workplace theft (see Figure 4) and giving false information for the purposes of tax evasion (see Figure 5).

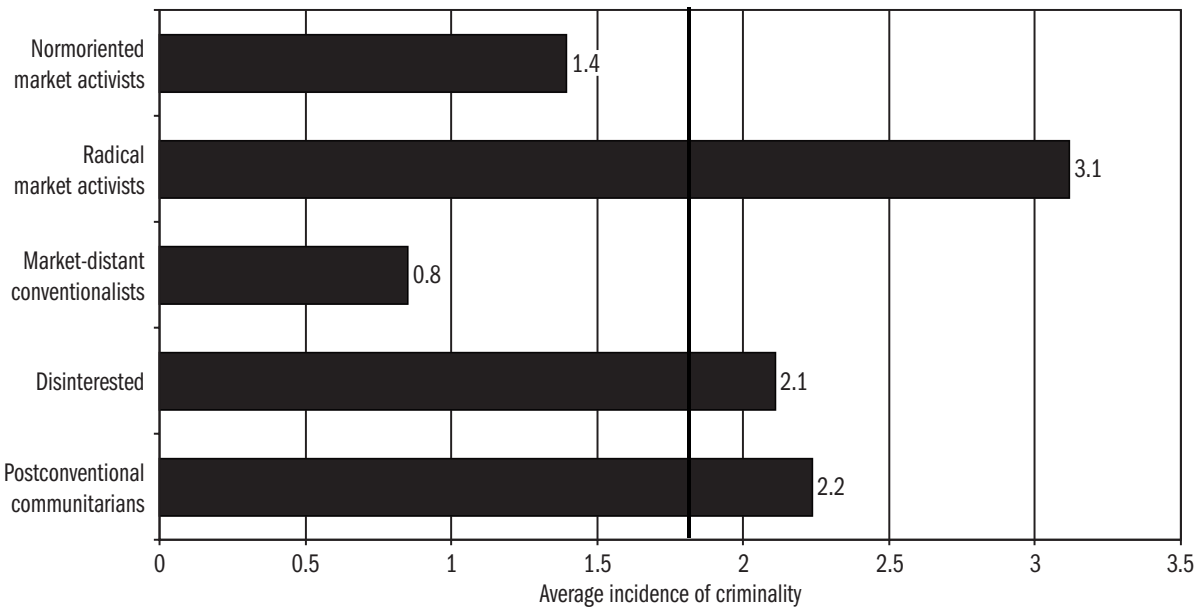
The results show clearly that the distribution pattern of incidence of criminality for the individual orientation types is similar to that for the degree of willingness to engage in illegal share-buying. Here, too, it is the radical market activists

and the market-distant conventionalists who show by far the highest and lowest incidence of criminality, respectively. Similarly, the figure for the norm-oriented market activists shows—analogue to the scenario for insider trading—a below average incidence of criminality both for stealing materials from the place of work and for tax evasion, although in absolute terms it is higher than the incidence for the market-distant conventionalists. By comparison, the disinterested and the post-conventional communitarians show a slightly above-average incidence of criminality, which underlines the increased willingness of these orientation types to take a flexible attitude to legal norms. It remains to be said that the post-conventional communitarians, although generally not averse to engaging in illegal personal gain in the context of economic transactions, are the group in the study sample that, unlike the disinterested, are more strongly involved than all the other orientation types in social volunteering—for example, in school and youth work and in charitable church activities.¹⁹

The analyses appear to confirm empirically the hypothesis of a connection between the norm-related orientation patterns of actors and their willingness to engage in illegal and illegitimate means of personal gain. The orientation pattern of the radical market activists thus proves to be particularly criminogenic. With respect to the offences investigated by the study, actors with this orientation pattern showed by far the greatest degree of willingness to commit criminal offences and also the highest incidence of criminality. The disinterested and the post-conventional communitarians also showed—measured against the overall average—a slightly greater tendency to engage in economic crime, but their ambitions were well below those of the radical market activists. By contrast, the norm-oriented market activists and above all the market-distant conventionalists show a disproportionately conformist style of behavior, which tips the scales in favor of adhering to legal norms rather than making use of opportunities for illegal personal gain.

¹⁹ On these findings, not documented here, see Burkatzki 2007, 199–212.

Figure 4: Mean incidence of unauthorized taking of materials from place of work in the last five years before the survey was conducted; differentiated according to membership of clusters (n=325)

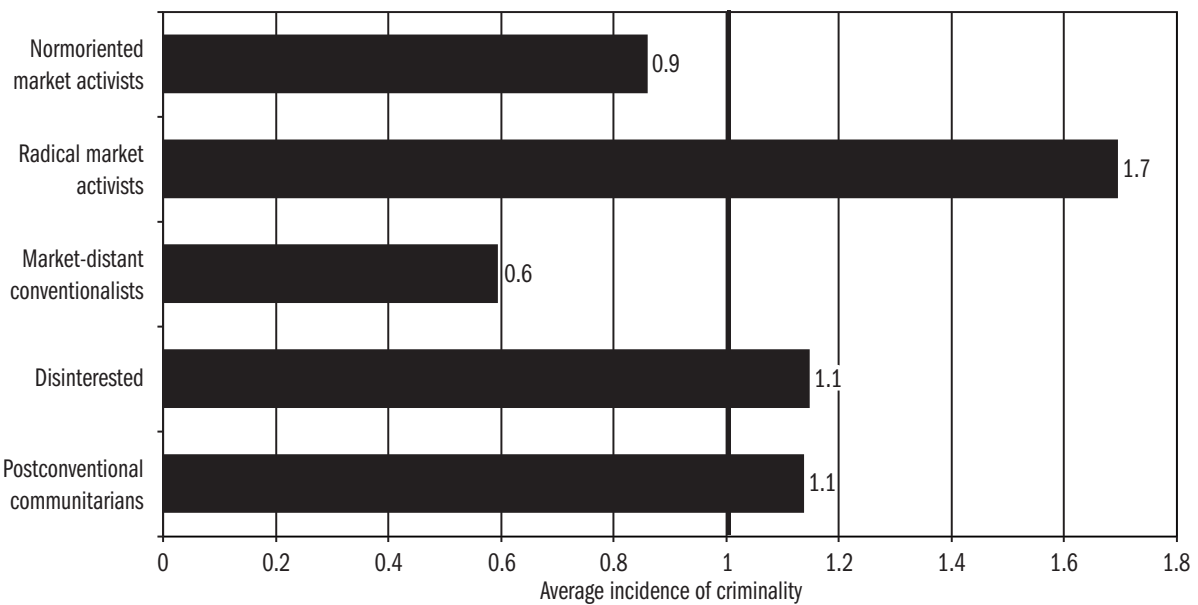


Eta²=0.046; p=0.005.

The black vertical line in the graphic shows the mean incidence of criminality in the random sample as a whole. All self-employed respondents were excluded from the analysis.

Source: *Wirtschaft und Ethik*, 2002.

Figure 5: Mean incidence of tax evasion in the last five years before the study was conducted; differentiated according to membership of clusters (n=361)



Eta²=0.047; p=0.001.

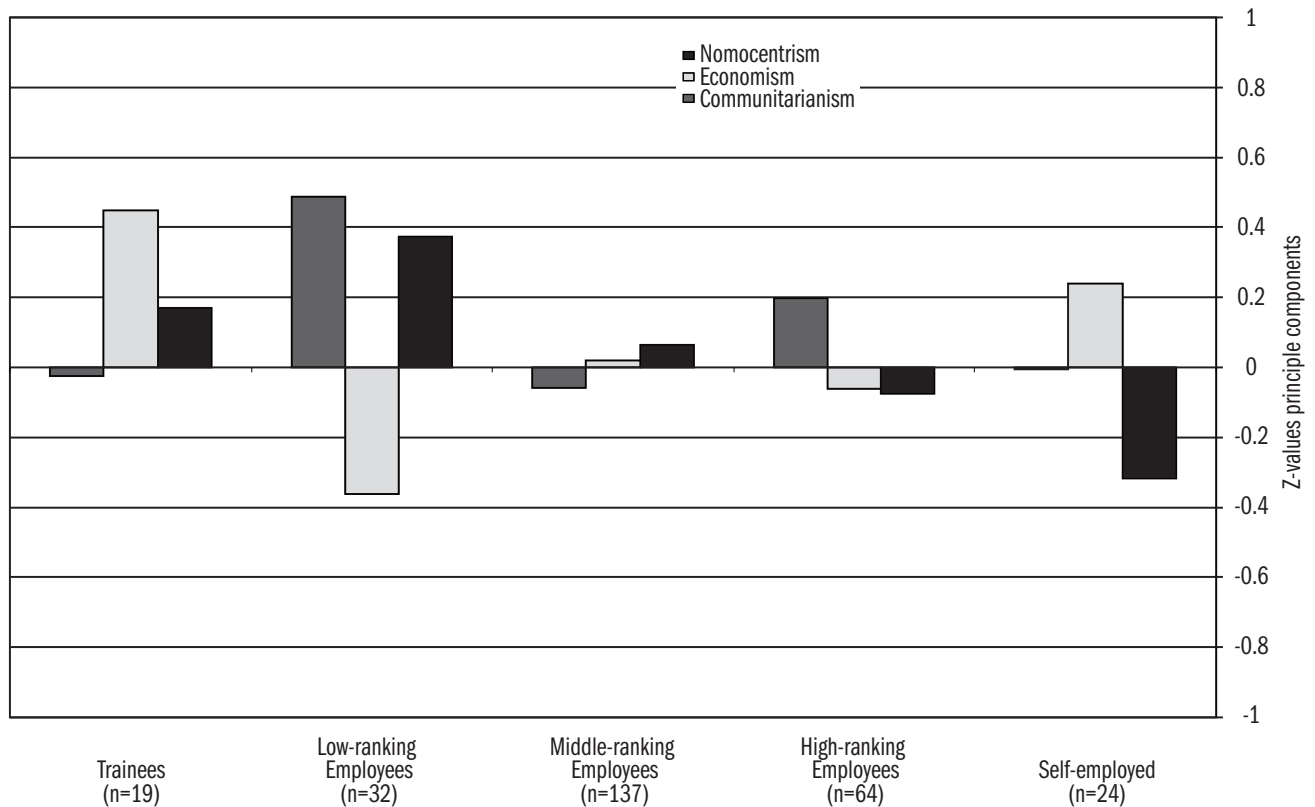
The black vertical line in the graphic shows the mean incidence of criminality in the random sample as a whole.

4.3 Norm-related Orientation Patterns and Degree of Market Inclusion

In answering research question number three regarding the market inclusion of the various orientation types, we focus particularly on what part of the workforce the respondents belong to. Here the analyses focused particularly on three groups: trainees, employees, and the self-employed. For the purposes of the analyses we assumed that trainees would show a relatively low degree of market inclusion while the self-employed would show a high degree of market inclusion. We also used a status hierarchy for the employee groups, subdividing them into low-, middle- and high-ranking employees to reflect differences in the degree of

market inclusion. Here it was assumed that the low-ranking employees performing simple tasks would show a low degree of market inclusion, while middle-ranking employees performing qualified tasks would have a middle level of market inclusion, and high-ranking employees performing managerial or leadership functions would tend to have a high level of market inclusion in their individual decision-making. Using membership of these employment groups and employment status within the group as a basis we then tried to ascertain whether there was a link between norm-related orientation patterns and the degree of market inclusion that informed their decision-making behavior.

Figure 6: Nomocentric, economic, and communitarian orientations in the German working population, differentiated according to membership of employment groups: trainees, low- medium- and high-ranking employees, and the self-employed



Eta²=0.047; p=0.001.

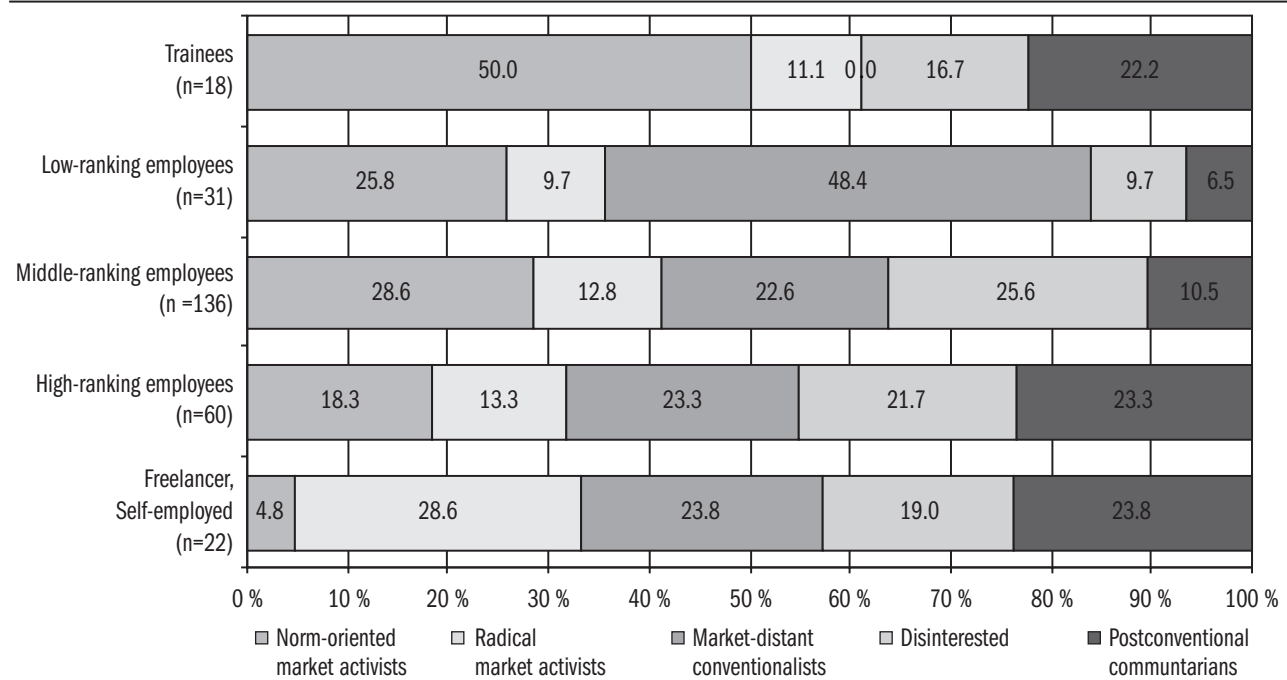
The black vertical line in the graphic shows the mean incidence of criminality in the random sample as a whole.

Thus the orientation profile of the trainees, in relation to the nomocentric and economic orientations, shows a partial similarity with the orientation pattern of the norm-oriented market activists. The average orientation profile of the low-ranking employees shows a considerable degree of similarity with the orientation pattern of our market-distant conventionalists. The orientation profile of the high-ranking employees also tends to resemble the orientation pattern of

the post-conventional communitarians. Finally, the orientation profile of the self-employed—in relation to nomocentric or economic orientation—shows at least a partial similarity with the orientation patterns of the radical market activists.

The descriptive findings outlined are also supported by the results of further bivariate and multivariate analyses (see Figure 7).²⁰

Figure 7: Proportion of norm-related orientation patterns in the various employment groups (n=267)



Eta²=0.047; p=0.001.

The black vertical line in the graphic shows the mean incidence of criminality in the random sample as a whole.

²⁰ The multivariate analyses investigated to what extent the disproportionate representation of individual orientation types in the employment groups was statistically significant when we also

controlled for age, gender, and educational differences (see Burkatzki 2007, 221-225). The results of the multivariate analyses are not documented here.

The analysis reveals a disproportionately strong presence of norm-oriented market activists among the trainees, where they represent 50 percent according to the evidence of our sample. In all the other employment groups the share of norm-oriented market activists is much lower. If one considers here the share of norm-oriented market activists in the employment groups, which decreases as the degree of influence and power over entrepreneurial decision-making processes rises, the impression is gained that the values of norm-oriented market engagement become increasingly suppressed the more actors become involved in entrepreneurial decision-making. By contrast, market-distant conventionalist attitudes are particularly strongly present among low-ranking employees, who generally appear to be strongly norm-fixated. Except among trainees, market-distant conventionalists are to be found in all the professional status and employment groups, but in the other groups their share is well below the value for the group of low-ranking employees. Finally we may observe that the radical market activists, who have proven to be most criminally inclined, are most strongly represented in the group of high-ranking employees and are concentrated above all among the self-employed. According to the analyses, the post-conventional communitarians also show an above average representation in these groups.

These findings convey the impression that an increased willingness to take a flexible approach to legal norms, which among the radical market activists is explicitly associated with a tendency toward a lack of social consideration, is primarily found among groups of actors who are closer to the center of market activity or in greater proximity to entrepreneurial decision-making processes.²¹

5. Conclusions

The present study set out to investigate the influence of market structures on the norm-related orientations and actions of actors. The main question asked was what norm-related

orientation patterns can be observed among market actors with respect to legal, economic, and community values. A related issue was to test the hypothesis that the increasing market inclusion of actors is associated with the suppression and erosion of orientations related to legal norms and fair play as a result of an orientation based chiefly on economic values. The study findings show that—with respect to nomocentric, economic, and communitarian orientations—five types of norm-related orientation patterns can be distinguished. In the sense that it shows degrees of commitment to economic values and to the legitimacy of legal norms the typology closely resembles Merton's typology of anomic adaptation types. Three of the five different types—the norm-oriented market activists, the radical market activists, and the market-distant conventionalists—turned out to be externally valid with respect to predicting individual intentions regarding engaging in illegal and illegitimate means of personal gain. Further analyses showed that the average representation of the various orientation patterns varies with the degree of market inclusion.

If we now return to our original thesis, that in post-industrial market societies values related to the common good are increasingly being eroded by a dominance of economic imperatives in the value-orientations of actors, the “norm-oriented market activist” type would at first sight appear to contradict this assumption. For the high degree of commitment to economic goals is accompanied among persons of this type by a positive commitment to the legitimacy of both formal legal and informal social norms. At the same time, the analyses of market inclusion suggest that the norm-oriented market activist—with regard to the employment and labor market—can be located less at the center and much more on the periphery of market activity: namely among trainees. The radical market activist, who places the importance of legal and communitarian issues firmly below his main goal of personal economic gain seems, by contrast—if one considers which employment groups he is

²¹ Further multivariate analyses based on the respondents' own reporting of criminal offences committed showed, for instance, that the “radical market activists” were significantly more likely than

actors with other norm-related orientation patterns to flee the scene of an accident after damaging someone else's vehicle (Burkatzki 2007, 178f.).

represented in—to be more at the center of market activity.²² This finding suggests that there is a connection between membership of a particular employment group (or labor market status) and norm-related orientation patterns. It appears that under the prevailing social conditions nomo-centric commitments lose their relevance the more actors—measured in terms of professional rank—take on professional leadership functions or engage in entrepreneurial activity on a self-employed basis. These findings suggest that the legitimacy of legal and communitarian norms only partially conforms with the requirements of the market. At least in the light of the findings it would appear that in contemporary society the law and the community have a higher value for actors on the periphery of the market than for actors at the center of market activity.

It should be noted, however, that the power of the empirical evidence presented here to answer the question of whether orientation toward the common good is being suppressed by a stronger commitment to central economic values is limited. First of all it should be stated that since our findings are based on a non-representative random sample it cannot simply be transferred to the German working population in general. In view of the size of the survey samples used by the study and the fact that the data were collected in the context of a cross-sectional study it cannot be ruled out that the norm-related orientation patterns of the actors are less a consequence than a cause of their market inclusion. It would be equally plausible to assume that actors have developed the orientation pattern of the radical market activist independently of their degree of inclusion in the market and via these orientation-patterns have later chosen to be self-employed. Hence, in themselves the findings do not justify the assumption of a pre-forming influence of market inclusion on norm-related orientation patterns.²³

If one assumes that the empirical findings of the study are valid, irrespective of its methodological weaknesses, it partially confirms the thesis that as market dominance increases an erosion of orientations related to the common good takes place in favor of a strengthening of individual commitment to economic goals. This seems to apply particularly in view of the contrasting presence of norm-oriented activists on the periphery and radical market activists at the center of market activity, as reconstructed in the present study on the basis of the respondents' membership in particular employment groups. This finding accords with the hypothesis formulated at the beginning (on the basis of differentiation theory) that the dominance of economic institutions in the concert of forces of social order allows the guiding principles of the economy as a part of the social system to become dominant even at the level of individual value orientations or rationality for action and whose logic has a subversive effect on attitudes to formal legal and informal social norms.

With respect to the “market and morality debate” the findings presented here also allow us to conclude that, contrary to the assumptions of liberal social theory, strong inclusion in market activity—measured in terms of norm-related behavioral intentions and actual behavior of actors—under current social conditions is not necessarily accompanied by a civilization of behavior. Rather the results of the analyses suggest that the increasing inclusion of actors in the institutional structures of the market encourages norm-related orientation patterns that tend to ignore the legitimacy of both formal legal and—in the case of radical market activists—informal social norms.

²² Interestingly, another study on the ethical attitudes of entrepreneurs produced carried out by Ulrich and Thielemann (1992) produced similar findings. The authors were able to identify explicit or implicit economic orientations in 75 percent of the respondents (Ulrich and Thielemann 1992, 93f.).

²³ It should be noted in this context, however, that the present study clearly distances itself from the principle of inductive-empirical proof. Insofar as the empirical findings are based on considerations of theories of cause and effect, this is done expressly in the context of a theory-led investigation strategy. This means that on the basis of assumptions about the link between inclusion in

market structures and actors' particular norm-related orientations we investigated to what extent these contradicted the findings of the empirical analyses. Exactly in this way the cross-sectional analyses used in this study were used to find out whether the theoretical assumptions were compatible with the content of the empirical findings.

Epilogue: Violence and behavioral imperatives of the market

Finally, it would be appropriate to discuss whether the findings presented allow conclusions to be drawn about market-driven origins of violent behavior. This topic has been addressed theoretically by Elliott Currie (1997, 1998), Steven Messner and Richard Rosenfeld (1997), and others. Currie (1997) stated that there is a causal nexus between an increased occurrence of violent crime and homicide on the one hand and the erosion of communitarian networks caused by market-driven demands of increased mobility and individual flexibility on the other. Regrettably, the present study is unable to go into these theoretical considerations in depth. Nevertheless, our empirical findings do allow hypothetical statements concerning the origins of a type of violent behavior that is labeled in the corporate and white-collar crime literature as *corporate violence* (for example Punch 2000, 243ff.; Tombs 2007, 531ff.; Friedrichs 2007, 59ff.).

One example of corporate violence would be the acceptance of unsafe working conditions, for instance when employees in the chemical industry are routinely exposed to toxic and dangerous chemicals without being equipped with protective clothing (Mokhiber 1988). Other examples can be found where unsafe products are knowingly delivered to consumer markets. One widely described example is the Ford Pinto case of the 1970s. Pre-production crash tests had established that the fuel system of the Pinto ruptured easily in rear-end collisions, causing an explosion. However, Ford had already begun tooling assembly line machinery for the Pinto, so management chose to manufacture the car as it was (see Rosoff, Pontell, and Tillman 2002, 98). Unofficially the corporation's management adopted the position that it would be cheaper to finance legal action and compensation payments for accidents involving fires and fatal injuries than to change the production line (ibid.). Another contemporary example of corporate violence against consumers is China's toxic milk scandal, where current estimates show that more than 53,000 children have fallen ill and about four have died (Economic Times 2008). Chinese dairy corporations, especially suppliers of Sanlu Group, used a chemical named melamine to make protein levels in milk appear higher than they actually were, thus allowing producers to cut production costs by watering down milk. In this case, too, the industries knew about the toxic properties

of melamine long before the scandal itself arose. Use of the chemical continued for financial reasons.

This type of corporate violent behavior—exhibited especially by managers and entrepreneurs—differs from conventional violence in several ways. First, corporate violence is committed in an indirect manner in the sense that people are not directly assaulted by another individual. Instead of they are negligently exposed to harmful conditions, products, or substances, for which corporate policies and actions are responsible (Friedrichs 2007). Second, the effects of managerial or corporate violence are temporally removed from the implementation of corporate policies or actions that caused the harm (60). Consequently it is often difficult to establish a clear causal relationship between corporate action and the injury to health or death of people affected. Third—and this is the main point of reference for the present study—corporate violence is by definition motivated by the ambition to maximize corporate earnings (or chances of survival) and to minimize corporate expenses (ibid.). Therefore it is to be understood as a consequence rather than a specifically intended outcome of such motivations. Nevertheless in the worldwide perspective corporate violence causes more harm to people than individual violence can ever do (Tombs 2007, 531f.).

With reference to the subject of the present study—the erosion of nomocentric and communitarian orientations occurring under circumstances of increased market dominance—the reported findings supply a plausible explanation for the appearance of corporate violence. Normative orientation patterns similar to those of radical market activism seem to be one central cause of all kinds of corporate violence. Common to both is a strong commitment to goals of economic success and a comparatively low attachment to values of common wealth and legal integrity. Consequently it can be hypothesized that the more strongly radical market activism is present the market process—other things being equal—the more often deeds of corporate violence will be committed. Future research in this area should focus on empirical tests of this hypothesis—which will be quite difficult to examine on a microanalytic level.

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Modernity Strikes Back? A Historical Perspective on the Latest Increase in Interpersonal Violence (1960–1990)

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Modernity Strikes Back? A Historical Perspective on the Latest Increase in Interpersonal Violence (1960–1990)

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There is a plethora of criminological explanations why criminal violence increased during the three decades between the early 1960s and the early 1990s. This paper argues that most available interpretations are lacking in three respects: they lack a historical perspective that anchors the three critical decades in a wider understanding of long-term trends; they take the nation-state as their unit of analysis and disregard important commonalities across the Western world; and they pay insufficient attention to different trends in broad categories of physical violence.

This paper therefore takes a macro-level and long-term perspective on violent crime, focussing on European homicide during the past 160 years. It demonstrates that the period of increase was preceded by a long-term decline and convergence of homicide rates from the 1840s to the 1950s. Also, it shows that both the decline and the increase primarily resulted from temporal variation in the likelihood of physical aggression between men in public space. It argues that explanations of these common trends need to take into account broad long-term cultural change common to Western societies. In particular, the paper suggests that shifts in culturally transmitted and institutionally embedded ideals of the conduct of life may provide an explanation for long-term change in levels of interpersonal violence.

Most criminologists agree that rates of violent crime such as robbery, assault, and homicide started to increase across the Western world sometime in the late 1950s or early 1960s and continued to do so for the next three decades until the early 1990s (e.g. Gurr 1981; LaFree 2005; Thome and Birkel 2007). Yet the reasons for this have remained a mystery. Not that there is a lack of criminological explanations. Rather, there are too many and those that we have often contradict each other. The menu includes a rise in delinquent opportunities due to increasing wealth and time spent away from the family (Felson 1987); greater strain resulting from youth unemployment and lack of opportunities (Greenberg 1977); too much welfare state and the rise of an underclass (Murray 1994); too little welfare state and social exclusion (Young

1999): institutional anomie resulting from the conflict between the ethos of material success and growing inequality (Messner and Rosenfeld 1994); excessive individualism due to a loss of communitarian values (Fukuyama 1999); and a loss of legitimacy of economic, social, and family institutions (LaFree 1998).

A thorough discussion of these theories and the empirical evidence they rely on is beyond the scope of this paper. Instead, it will take a broad view, arguing that many interpretations of the late-twentieth century-rise in violent crime lack a historical perspective in the sense of anchoring the critical decades in a wider understanding of trends before and after. In contrast, the current analysis will extend the

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time horizon back to the 1840s, a period that marks the beginning of a period of sustained decline in criminal violence across Europe.

Indeed, several historians of crime have pointed out that the increase of violent crime in the second half of the twentieth century may have been a minor deviation from an even longer declining trend that may have prevailed over several centuries (Gurr 1981; Rousseaux 1999; Spierenburg 1996, 2001). In particular, a patchwork of mediaeval and early modern estimates of homicide rates across Europe, collected through meticulous archival work by historians of crime, suggests that homicide has become significantly less common over several centuries, probably starting in the late sixteenth century and continuing into the nineteenth century (for an overview of the empirical evidence see Eisner 2003). Theoretically, explanations of this trend have mainly relied on the seminal work of the sociologist Norbert Elias, in particular his *Theory of the Civilizing Process*, first published in 1939 (Elias 1978). As is well known, the backbone of Elias' *Theory of the Civilizing Process* is the idea that increasingly civilized behaviour is brought about by the interplay between two structural forces. The first is the century-long expansion of the state monopoly of power that led to increasing control over behaviour. The second force are the growing "chains of interdependence" brought about by market exchange and capitalism, which put a premium on peaceful interaction guided by self-interest. As a result, researchers influenced by the ideas developed by Elias expect an increasing sensitization to violence (Wiener 2004), a decline in harsh and cruel public punishment (Spierenburg 1984), and a drop in interpersonal violence.

Faced with the observation of increasing violent crime during the second half of the twentieth century, commentators of Elias' work have suggested that this may merely reflect a short-term deviation, in the sense of a decivilizing process (Mennell 1990, 2001). However, from a perspective following in the footsteps of Elias it is not entirely clear how such a decivilizing process came about in Europe in the midst of an expanding state, growing interdependence, and relative peace during the second half of the twentieth century.

Indeed, one might argue that the notion of a decivilizing process is a different label for an increase in criminal violence rather than a genuine explanation.

This paper will therefore tentatively suggest a theoretical perspective that is based more on Max Weber than Norbert Elias. In particular, I will propose the notion of models of *conduct of life*, developed in Max Weber's studies on the Protestant ethic (Weber 1920, 1982), as a useful theoretical tool for understanding macro-level variation in levels of criminal violence over time. Weber used the term *Lebensführung* to describe the distinctive ethos of a society or social group regarding the right way of living a life. Unfortunately, the term has often misleadingly been translated into English as "life-style", a term that wrongly evokes associations with fashion and leisure-time. In contrast, *Lebensführung* or conduct of life refers to a much wider cultural script encompassing work, politics, beliefs, education, and individual character. These models of conduct of life become reinforced and stabilized through institutions such as schools, families, the church, and bureaucracies. In *The Protestant Ethic and the Spirit of Capitalism* Weber argued that models of conduct of life can be enormously powerful forces that mould the details of daily action and shape the trajectories of economic life. In a similar vein, I will argue that the major shifts in levels of interpersonal criminal violence over the past 160 years were associated with broad changes, across Europe, in shared cultural models of what constitutes a desirable and good "conduct of life". These are said to influence levels of interpersonal violence through their effects on patterns of socialization as well as by affecting expectations about adequate interaction in daily situations, especially in public space.

The paper is organized in three parts. In the first part I will introduce the *History of Violence Database* and present the data upon which the empirical analysis will be based. The second part will provide an overview of the main trends in homicide rates across western and central Europe between 1840 and 2005, based on data from seventeen countries. The third part will discuss three main trend periods and putative factors that may have been causally relevant.

1. The Data

The subsequent discussion will present national time-series of homicide rates covering seventeen European countries over a period of up to 160 years, i.e. from about 1840 to the present. To my knowledge, it is thus based on the most comprehensive collection of long-term national homicide rates in Europe to date.

Table 1 gives an overview of the seventeen countries that are included in the collection as well as the time-periods covered and the main data-source used. It shows that the data comprise most of western Europe while there are large gaps for Eastern Europe including, e.g. Poland, Russia, or Greece.

Table 1: National series of homicide rates in the history of violence database: Time periods and countries currently covered

Country	Time periods currently covered ¹	Number of years	Main type of source ²
Austria (before 1918 Austrian part of Austro-Hungarian Empire)	1862–85, 1923–35, 1947–2003	94	Conviction and mortality statistics
Belgium	1870–1913, 1919–1997	123	Mortality statistics
Denmark	1921–2001	81	Mortality statistics
England and Wales	1833–2002	170	Police statistics
Finland	1754–2003	250	Mortality statistics
France	1827–1920, 1925–2003	162	Judicial statistics and Mortality statistics
Germany (before 1871 Prussia)	1836–1914, 1948–2004	146	Mortality statistics
Hungary (before 1918 Hungarian part of Austro-Hungarian Empire)	1882–87, 1923–32, 1950–2003	70	Judicial statistics and mortality statistics
Ireland	1842–1918, 1926–2002	154	Police statistics
Italy	1875–2003	129	Police statistics and Mortality statistics
Netherlands	1900–2004	105	Mortality statistics
Norway	1876–2003	128	Mortality statistics
Portugal	1950–2000	51	Mortality statistics
Scotland	1858–2003	123	Police statistics
Spain	1883–1918, 1947–2002	92	Judicial statistics and mortality statistics
Sweden	1754–2001	248	Mortality statistics
Switzerland	1877–2001	125	Mortality statistics

Notes:

1. As of April 2006.

2. See Appendix for more detailed information about the sources.

Additionally, the database includes disaggregated series for infanticide and for male and female victims whenever they were available over sufficiently long periods of time. Also, for two countries (England and Wales, Switzerland) there are series broken down by age and sex of the victim. Finally, contextual data on the age distribution of offenders, the modus operandi, or regional differences within countries are added on an ad-hoc basis where found during research in historical publications. These data convey additional

information about long-term change in contextual characteristics of homicide, which may provide important clues about underlying causal dynamics.

A mix of three strategies was used to collect the data, namely reviewing previous publications, retrieving data directly from official statistical publications, and approaching scholars and statistical offices for information and specific data.

The earliest study of cross-national homicide series was probably the one conducted by the Italian criminologist Augusto Bosco in 1889. Beyond being an excellent analytical piece of work, it provides series of data of police recorded or adjudicated homicides for various countries. Another set of national series was published a few years later in Enrico Ferri's *L'omicidio-suicidio* (1894) and updated in 1925 (Ferri 1925). For Scandinavian countries the most comprehensive source of long-term data is the work by Verkko initially published in 1931 in Finnish and later partly translated into German and English (Verkko 1937, 1951, 1967). Besides providing a detailed methodological discussion, Verkko presents complete series of homicides and infanticides according to the Swedish and Finnish cause of death statistics from 1754 to 1920. The most important recent major study on homicide trends is by LaFree and Drass (2002) covering forty-four countries over the years 1950–2000. It uses the mortality statistics compiled annually by the World Health Organization, overall the most valid and reliable source for more recent cross-national comparative homicide data.

Although these studies provided valuable insight, efforts were made to trace the data back to original official publications, in order to better understand what definition of homicide and what source had been used. Also, using original publications was the best way to ensure consistency of data collection over time and to trace possible changes in reporting or recording routines. Sometimes the data could be found in national statistical yearbooks, but often more specialized governmental publications had to be consulted.

Specialists in national statistics offices were often helpful in providing access to data and explaining differences between alternative sources. Also, for some countries specialist scholars provided most valuable information, including permission to integrate their data in this database. I am especially grateful to Ian O'Donnell for his series of homicides in Ireland from 1841–2001, to Martti Lehti for providing me with series of data on Finland, and to Gary LaFree for the dataset on cross-national homicide rates from 1950–2000.

2. Methodological Issues

Analyses of long historical series of homicide rates are invariably confronted with two key questions: Do available

data reflect *real* levels of criminal homicide? And is homicide an indicator of serious interpersonal violence more generally? I briefly explore both questions before moving on to the substantive findings.

Measurement objectives. The conceptual target variable of this study is criminal homicide. It is commonly defined as the intentional killing by a human being of another human being and comprises murder, manslaughter, and infanticide. By conventional standards this includes deaths due to injuries received in a fight, argument, quarrel, or assault, or during the committing of a crime – although in these cases the intention usually is not to kill a person but to inflict injuries. However, it excludes deaths inflicted by persons while acting within legitimate rules on behalf of the state (i.e. killing during war, executions, police officers while on duty) and it does not include accidental deaths (e.g. traffic accidents).

Most researchers now agree that homicide data are the most reliable and valid indicators for conducting comparative analyses between countries and over time (e.g. Marshall and Block 2004). There are several reasons for this. Homicide is similarly defined across countries and time, reporting is believed to be more complete than for any other crime, and recording by authorities is particularly scrupulous. But like other measures of crime, the fewer the procedural stages between the actual recording and the production of the statistics, the more likely data are to reflect actual occurrence. In this respect, police statistics and mortality statistics are generally assumed to be superior to conviction statistics. They are hence the preferred data source for this study.

Police statistics report homicides known to the police, usually meaning that *prima facie* evidence suggests an intentional killing of a person. Depending on a country's legal framework, figures may be broken down by legal subcategories such as infanticide, murder, and manslaughter. Mortality statistics, on the other hand, are based on the death certificates completed by the coroner, pathologist, or surgeon. Classification as homicide implies that the death is believed to have been the result of an intentional act. As a rule, the verdict is based on an inquest that reflects the available forensic evidence.

Theoretically, both sets of data should be strongly correlated because a coroner's verdict of "homicide" requires further criminal investigation while a corpse found by the police should always lead to a forensic inquest. Yet differences may occur for various reasons other than slippage in record-keeping: First, the territorial reference differs as the police count events that happen *in a country* while mortality statistics register events that happen *to the residential population of a country*. Second, police statistics record the year when the crime became known while mortality statistics count the year when the death occurred. Third, police records and death certificates are not necessarily completed at the same time and the legal assessment of the death may have changed between both procedures.

The extent of overlap can be assessed in countries where statistical series from both recording systems are available over longer periods of time. Table 2 shows a sample of correlations between police and mortality statistics for selected periods and countries. The correlations are between $r = .83$ and $r = .92$ suggesting a good fit between series derived from the two sources.

Table 2: Bivariate correlations between homicide rates according to mortality statistics and according to police statistics, selected countries and periods

Country and data	Correlation
Finland: Police recorded homicides versus mortality statistics, 1951–2000	.83
Sweden: Police recorded completed homicide versus mortality statistics, 1950–2000	.92
Italy: Police recorded homicide, incl attempt versus mortality statistics, 1950–1986	.91
England: Police recorded homicide versus mortality statistics, 1872–1998	.91

This corresponds with research in the United States (Cantor and Cohen 1980; Rokaw, Mercy, and Smith 1990) and Australia (Mouzos 2003) where a good overall fit between mortality statistics and police data has been documented. Similarly, Birkel and Thome (2004) found correlations of .80–.95 between police and mortality statistics for the second half of the twentieth century in Germany, England and Wales, and Sweden.

Advantages of mortality statistics. However, in several respects mortality statistics are generally superior to police statistics for assessing long-term trends across nations. The essential pragmatic reason is that historically they are more widely available than police statistics (see Table 1). But there are also more substantive advantages. One is that classification in mortality statistics is based on medico-legal criteria that have remained relatively stable over time. In particular, "homicide" has always been a distinct category in the International Classification of Diseases (ICD) since its inception in 1900, being defined as "death resulting from an injury intentionally inflicted by another person" (for an overview of the history of the ICD see Israel 1978). But even before 1900 "homicide" was a standard category in mortality statistics, reflecting the fact that it distinctly required legal action to be taken.

Also, death statistics are less amenable to changing legal frameworks than police data. For example, the legal definition of "infanticide" varies significantly between countries and over time. Some countries subsume it under murder and manslaughter, others have specific provisions but with varying content. In contrast, the statistical definition as the intentional killing of a child below age one is much more universally applicable. Finally, as mentioned, mortality data often provide information on the sex and age-group of the victims, which makes it possible to examine trends for different types of homicide separately.

However, one should also note two limitations of mortality statistics (that equally apply to police statistics): The first is that mortality data are probably incomplete for some subtypes of homicide and that the extent of under-coverage is likely to have changed over time. A pertinent example is infanticide. It is almost certainly not fully documented in nineteenth century statistics as concealment was relatively easy, because midwives sometimes condoned the acts of desperate women, and because forensic technology was not always able to distinguish intentional killing from natural death due to suffocation (L. Rose 1986).

The second problem is that mortality statistics reflect the expert assessment before the case is fully investigated and a legal decision is returned. The category of "homicide"

may therefore contain a proportion of cases that are finally found not to have been an intentional killing. To account for this uncertainty some countries (e.g. England and Wales, Scotland) have created dynamic databases that update the legal classification as the investigation progresses. England and Wales, where a dynamic database was introduced in 1976, is an interesting case because it produces two sets of data that operate according to opposite logics. The *Criminal Statistics* operate according to a subtractive logic. They collect data on “initially recorded” homicides of which 10–15 percent become eventually reclassified as having had some other cause (Home Office 1999). The mortality statistics, in contrast, operate according to an additive logic. Cases of likely homicide are initially coded under a specific category “verdict pending” (ICD-classification E988.8 in ICD-9, Y33.9 in ICD-10) and only become classified under one of the homicide categories of the ICD when the final verdict is known. While the two datasets produce highly diverging numbers during any current year, their estimates converge two or three years later (Rooney and Griffiths 2004).

Homicide rates and broader violence trends. Homicide rates can certainly be analysed in their own right. But are they also an indicator of criminal violence in a wider sense? To explore this question, Hofer (2000) examined the relationship between the long-term trend in homicide rates as measured in the Swedish mortality statistics and the rate of convictions for assault according to court statistics during 1841–1998. Although there are short-term deviations between the two series (i.e. over 5–10 years), the long-term trends show a remarkable extent of co-variation. Other studies examining the nineteenth and early twentieth centuries also generally find good correspondence between homicide trends and broader violence indicators (e.g. Gattrell 1980; Gurr, Grabosky, and Hula 1977).

For shorter periods the most conclusive evidence relates to the United States. There the annual National Crime Victim Survey (NCVS) provides good estimates of change in the risk of being assaulted since 1974. Over the period 1974 to 2002 the correlation between assault as measured in the NCVS and homicide rates is $r = .91$, suggesting that in the United States homicide does reflect wider change in violent

behaviour (Langan 2005). Similar comparisons between trends in victim surveys and homicide data in Europe are less conclusive (Tonry and Farrington 2005), but they are based on shorter time spans and often on smaller survey samples than the U.S. National Crime Victim Survey. It is hence probably fair to say that the question of how closely change in levels of homicide is indicative of more general trends in violence is not fully resolved.

There are two main reasons why the ratio between non-lethal interpersonal violence and homicide may vary over long periods of time, namely change in *technologies of killing* and in *technologies of healing*. By technologies of killing I mean the destructive effectiveness of instruments in the hands of those who are capable and willing to use them. Where effective instruments such as swords or guns are readily available to people with a given level of propensity to engage in aggressive acts, a lethal outcome becomes more likely (Zimring and Hawkins 1998).

It is difficult to assess how technologies of killing have affected trends in homicide rates over the past 150 years. Firearms have become more precise and easier to conceal, whereas, at the same time, governments across Europe have put increasing controls on their availability. In the United Kingdom, for example, the Gun Licence Act of 1870 introduced a fee to be paid by anybody wishing to carry a firearm “outside the curtilage of his dwelling house” (Greenwood 1972, 17). The first effective restrictions were established by the 1920 Firearms Act, which, however, still considered self-defence a good reason to possess a firearm. This exception was eliminated in the early 1960s, followed by further legal efforts, culminating in the 1990s, at more effectively restricting access to firearms (Malcolm 2002).

Technologies of healing comprise the communication, transport, and medical technologies that influence the likelihood that a wounded person will die from the injuries. This includes telephones to contact emergency services, ambulances to bring a person to a hospital, and the medical expertise to operate on gunshot and stab wounds. Technologies of healing have dramatically advanced over the last two hundred years. For example, Monkkonen (2001a) finds that up to two thirds of nineteenth century victims of

homicide in New York suffered at least several hours before they died, the likelihood being that many of them would be rescued with contemporary technology. Also, Harris et al. (2002) estimate that US completed homicide rates in the late 1990s might have been up to three times higher than they actually were, had medical technology remained at the same level as it was in 1960.

Overall, the shifting interplay between the technologies of killing available to motivated offenders and the technologies of healing in the hands of medical experts must have affected the odds of a fight, a robbery, or a sexual assault resulting in a person's death. However, more research would be needed to express such change in more precise ways over longer periods of time.

The denominator. Homicide rates are usually computed as the total number of cases in a year for every 100,000 members of the national population. This is not without problems since the age distribution of offenders and victims differs significantly from the age structure of the total population. In most societies, for example, offender rates peak at age 20–35. Societies with a younger population may hence have elevated homicide rates simply because a larger proportion of the population is in the high-risk age bracket. For comparative purposes it is desirable, therefore, to control for differences in the age structure by computing age-standardized homicide rates (Monkkonen 2001b). However, this requires age-specific data for both offenders and victims, which are rarely available over long historical periods. In the current data-set such data could be found for

two countries (England and Wales, Switzerland). Computing age-standardized victimization rates suggests that the deviations from unstandardized rates are relatively small and do not affect the substantive conclusions. For these reasons all homicide rates are based on the total population as the denominator.

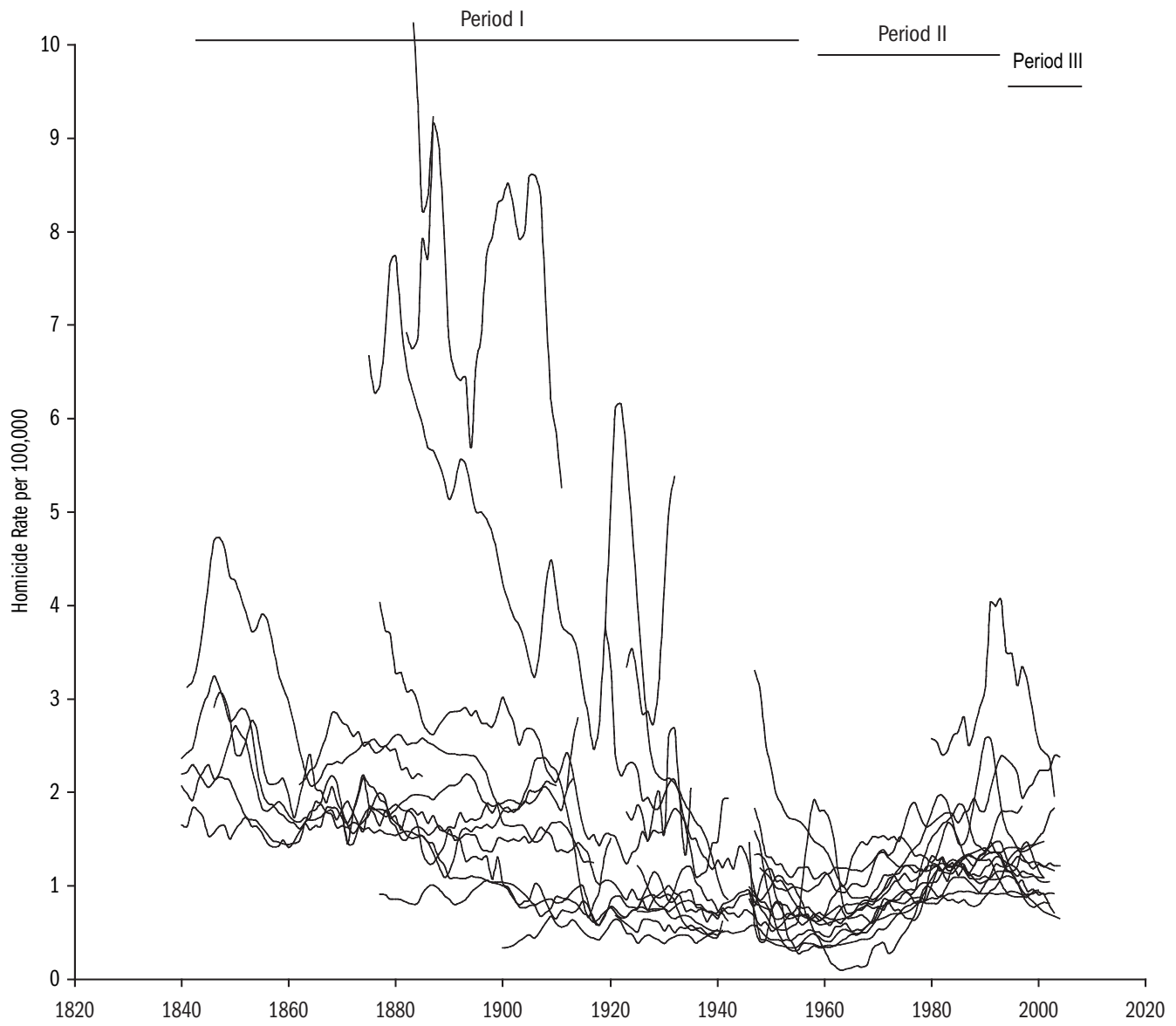
3. What has happened? An overview

The historical reference period of the subsequent analyses starts in 1840, although the national series for Finland and Sweden go back almost another 100 years. There are two reasons for this, one being that 1840 is the earliest period for which the database provides national series for a sizeable sample of European countries (England and Wales, Finland, France, Ireland, Prussia, Scotland, and Sweden), meaning that generalizations about trends can be based on a reasonably large evidence base.

Secondly, homicide rates in Finland and Sweden increased noticeably from about 1770 to 1840 and evidence suggests possible increases elsewhere in Europe as well (Hofer 1991; King 2006). This increase comes to a halt around 1840 meaning that this decade probably constitutes a turning-point in the long-term development of homicide rates.

I present the data in two complementary ways. Figure 1 shows sixteen national series for periods of up to 160 years combined in one cluster of graphs. The main purpose here is to provide an idea of the shared underlying trajectory that has characterized the development of homicide in Europe as a whole.

Figure 1: Overall homicide rates in sixteen European countries, per 100,000, three-year moving averages



Notes:

The figure includes data for Austria (1862-1885, 1923-1935, 1947-2003), Belgium (1870-1997), Denmark (1921-2001), England and Wales (1840-2002), France (1840-2002), Prussia/Germany (1840-1913, 1947-2003), Ireland (1841-2001), Italy (1875-2001), Norway (1877-2002), Netherlands (1931-2002), Scotland (1847-2000), Spain (1883-1917, 1947-2001) Sweden (1840-2002), Switzerland (1877-2001). Finland is excluded because it has unique trends in homicide rates.

For sources see Appendix 1.

Periods excluded for Belgium (1914-1918, 1942-45), France (1942-45), Italy (1942-45), Netherlands (1942-1945), Norway (1940-1945).

Table 3: Average homicide rates in seventeen European countries, 1840–2004

Year	1840-49	1850-59	1860-69	1870-79	1880-89	1890-99	1900-09	1910-19	1920-29	1930-39	1940-49	1950-59	1960-69	1970-79	1980-89	1990-99	2000-04
England	1.7	1.6	1.7	1.6	1.5	1.1	0.9	0.7	0.7	0.8	0.8	0.7	0.7	1.0	1.2	1.4	1.7
Scotland	2.9	2.4	2.0	1.8	1.5	1.4	0.9	0.7	0.9	0.8	0.7	0.6	1.2	1.6	1.8	2.2	2.1
Ireland	4.0	3.7	2.4	2.5	2.5	2.3	1.6	1.5	1.0	0.6	0.5	0.4	0.4	0.8	0.8	1.2	1.5
Sweden	2.1	1.7	1.8	1.7	1.6	1.5	1.5	1.3	0.9	0.8	0.8	0.7	0.7	1.1	1.3	1.2	1.0
Norway	--	--	--	0.9	0.9	0.9	0.8	0.8	0.8	0.6	0.6	0.4	0.5	0.7	1.2	1.0	0.9
Denmark	--	--	--	--	--	--	--	--	0.6	0.5	0.9	0.8	0.5	0.7	1.2	1.2	1.1
Belgium	--	--	--	1.8	1.7	1.7	2.0	2.5	2.2	1.6	1.6	0.7	0.7	1.1	1.6	1.7	--
Netherlands	--	--	--	--	--	--	0.5	0.5	0.5	0.4	1.3	0.5	0.4	0.7	0.9	1.2	1.2
France	2.2	2.2	1.7	1.8	1.9	2.0	2.1	1.3	0.9	1.0	0.8	1.0	1.0	0.9	1.1	1.0	0.8
Germany	2.8	2.3	1.7	1.9	1.5	1.5	1.9	2.4	2.1	1.6	1.2	1.0	1.2	1.2	1.2	1.0	0.7
Austria	--	--	2.4	2.6	2.2	--	--	--	1.8	2.0	1.6	1.2	1.0	1.4	1.4	1.2	0.8
Italy	--	--	--	6.8	6.2	5.1	3.9	3.3	4.3	1.8	2.0	1.7	1.0	1.2	1.8	1.8	1.2
Switzerland	--	--	--	3.7	3.0	2.8	2.6	1.9	1.5	1.5	1.1	0.9	0.7	0.8	1.2	1.4	1.1
Spain	--	--	--	--	9.1	6.8	8.2	5.3	--	--	1.4	0.5	0.2	0.6	1.0	0.9	1.0
Portugal	--	--	--	--	--	--	--	--	--	--	--	1.2	1.0	1.3	1.4	1.5	1.0
Finland	3.2	2.9	3.4	3.3	3.7	3.0	4.8	12.3	9.5	7.0	4.0	2.6	2.2	2.9	2.9	3.1	2.5
Hungary	--	--	--	--	7.6	--	--	--	3.1	4.9	--	--	--	--	2.6	3.5	2.3
Mean ¹	--	--	--	2.51	2.31	2.09	1.81	1.56	1.47	1.06	0.99	0.79	0.77	1.02	1.33	1.43	1.29
Std. dev.	--	--	--	1.78	1.58	1.27	1.00	0.88	1.16	0.46	0.50	0.40	0.25	0.27	0.34	0.40	0.45

1. Unweighted mean of England&Wales, Scotland, Ireland, Sweden, Norway, Belgium, France, Italy, Switzerland.

Table 3, in contrast, shows the average rates per country and decade for the period 1840–2003, with data arranged by geographical proximity. Furthermore, the table presents two summary indicators. The first is a European average for each decade from the 1880s onwards. It is based only on those countries that have relatively complete series of data from 1880 to 2000 (England and Wales, Scotland, Ireland, Sweden, Norway, Belgium, France, Italy, Switzerland). The average is not weighted by population size. The second indicator shows the standard deviation of the homicide rates for each decade from the 1880s to the 2000s. The standard deviation can be interpreted as a measure of the average amount of “variability” of homicide rates in a comparison across countries at a given point in time.

Three methodological notes should be considered when interpreting these figures. First, all data include infanticide since consistently separating infanticide is currently only possible for a limited number of countries.

Second, during the last years of World War II both police recorded homicides and homicides recorded in mortality statistics soared in most occupied countries. A considerable part of the increase probably reflects partisan fighting against the German occupying forces and collaborators. But there may also have been a rise in conventional violence due to the breakdown of the state monopoly of power between the collapse of German administration and the reestablishment of regular policing after the end of the war (Rous-

seaux, Vesentini, and Vrints 2008). These periods need to be analysed separately and I therefore decided not to include them in the graphs and figures.

Third, Finland is not included in Figure 1 and not incorporated in the calculation of European averages and standard deviations in Table 3, although the respective national figures are shown in the table. The reason is that Finland has long been known to have both unusually high contemporary homicide rates and an atypical long-term trend in comparison with the rest of Europe (LaFree and Drass 2001). In particular, starting from already high average levels at the turn of the twentieth century, Finland experienced a “homicide wave” between about 1905 and 1935 leading up to rates averaging above 8 per 100,000 (Lehti 2001). Hence Finland was treated as an “outlier” since the main purpose of synthesizing the data was to illustrate the main shared trajectories across western Europe.

One might doubt the utility of combining sixteen national series in one single figure. However, the rationale is that the figure visualizes a number of important characteristics of the long-term trajectory across western Europe—while intentionally toning down the specificities of individual countries. More particularly, it suggests three main periods:

The first period roughly comprises the century between the 1850s and the 1950s and is described by the twin processes of *decline* and *convergence*. A second period comprises the three decades between the early 1960s and the early 1990s. During these thirty years homicide rates across Europe followed a joint upward trend, with national differences in any given year within a very narrow band. A third period starts in the early 1990s when homicide rates return to a declining trend in most European countries.

4. 1850–1960: Decline and convergence

All national series included in Figure 1 followed a declining trajectory in the second half of the nineteenth century that continued until about 1950. This is documented for individual countries as well as for the averages shown in Table 3. For nine countries with continuous series since the 1880s the average homicide rate is about 2.4 per 100,000 in the 1880s and drops to about 0.8 in the 1950s.

This is a significant decline, which has been found to correspond to a wider fall in interpersonal criminal violence. In Sweden (Hofer 2000), Germany (Johnson 1995: 127), and England and Wales (Gatrell 1980) similar declining trends are documented for broader categories of recorded violence such as assault or robbery. This is particularly noteworthy, as police forces grew and record-keeping became more professional over the century – factors that would, if anything, have inflated crime statistics.

The second major characteristic of this period is convergence, visually represented by the inverted fan pattern in Figure 1 (see also LaFree 2005). This is documented statistically in the decline of standard deviations in Table 3, but one may also think of it in terms of the range of rates. Around 1880 national homicide rates varied by a factor of 1:10 between countries, ranging from a low of about 0.8 in Scotland to about 8.0 in Italy. By 1950, the range had dwindled to a ratio of 1 to 4.

A closer look at individual countries reveals where the convergence comes from. By around 1880 most countries in the northern and western Europe, primarily England and Wales, Scotland, Sweden, Norway, and France, already had low homicide levels. In contrast, countries in southern Europe – Italy, Spain, Switzerland, and Austria – still recorded significantly more homicides. Indeed, regional maps by Ferri (1895, 285ff) suggest that particularly high homicide rates continued to prevail in a rim of areas on the outskirts of Europe, including the rural areas of Spain, the southern rim of France, Corsica, the mountain valleys of Switzerland, the south of Italy, Greece, the eastern parts of the Austro-Hungarian empire, the eastern provinces of Prussia, and – although at lower overall levels – the border areas between England and Scotland. By 1950 these differences had mostly disappeared as a result of the fast decline in homicide rates in those peripheral areas where they had been highest seventy years earlier.

Upon closer inspection it also seems possible to tentatively distinguish three main groups of neighbouring countries with similar variations of the trend.

Figure 2: The northern European pattern for homicide trends (per 100,000, 3-year moving averages)

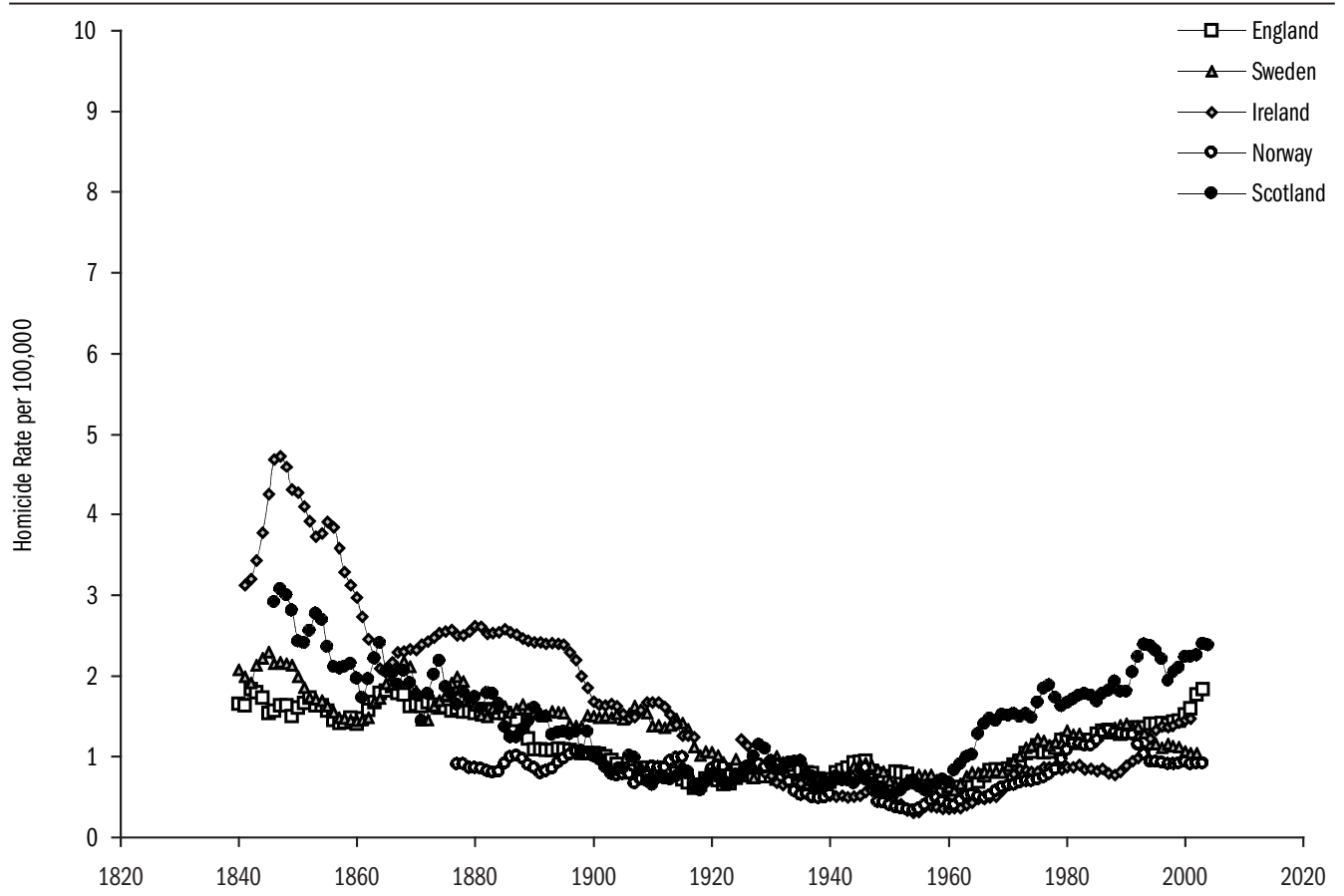


Figure 3: The continental European pattern for homicide trends (per 100,000, 3-year moving averages)

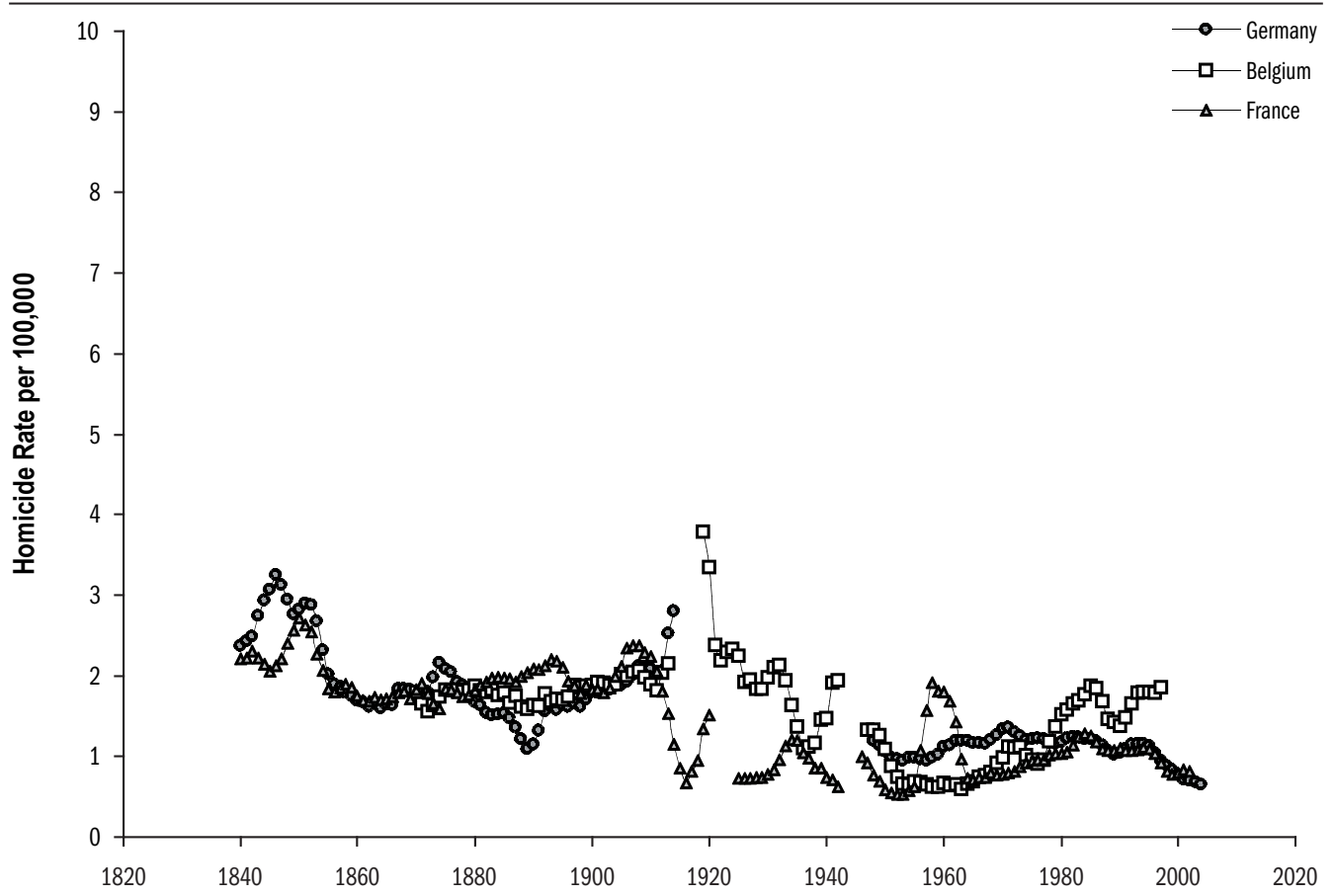
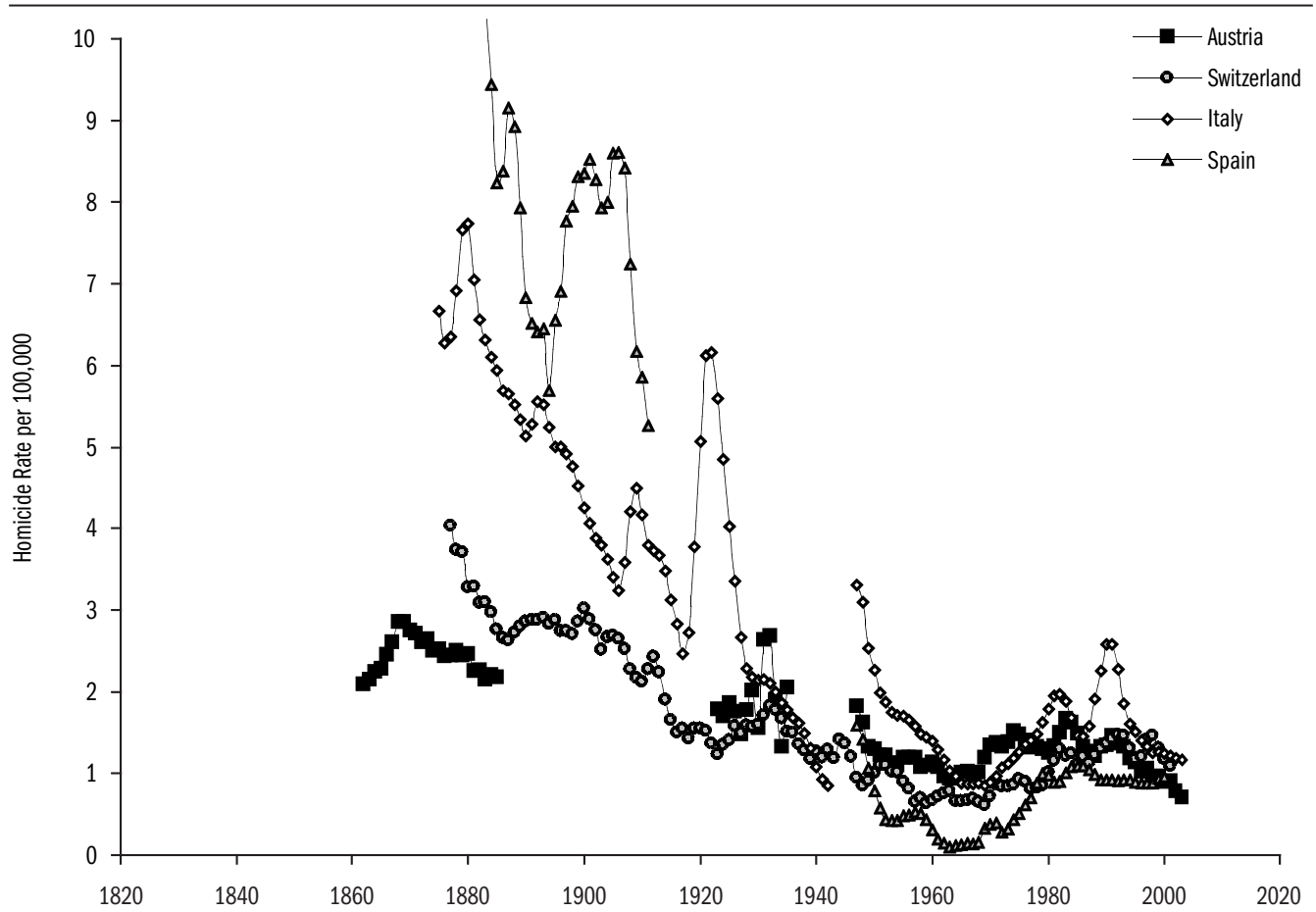


Figure 4: The southern European pattern for homicide trends (per 100,000, 3-year moving averages)



One group is the British Isles, Norway and Sweden with very similar trends of gradual, uninterrupted moderate decline between 1840 and 1950. A second is France, Belgium, and Germany, where homicide rates were significantly lower in the 1950s than at the beginning of the series but rose between about 1885 and the beginning of World War I. A third group are countries in southern Europe including Spain, Italy, Switzerland, Austria, and most probably also Greece, where homicide rates were much higher in the mid-nineteenth century and the decline was particularly steep.

Differences by sex and age of the victims. Data on victim characteristics such as age and sex provide important additional information about which types of homicide contributed most to the overall decline. Whereas overall national statistics are available for many countries, the data-set cur-

rently only comprises series with detailed victim categories for Switzerland, Sweden, and England and Wales. They reveal two main dynamics.

First, they suggest that the overall decline was mainly a decline in male-on-male violence. In Switzerland, for example, the ratio of male to female victims dropped from 2:1 in the 1880s to 1:1 in the 1950s. Over the same period the ratio in Sweden fell even more, from 3:1 to 1:1. The same is true for England where findings by Wiener (2004, 167) provide additional insight. From the 1860s to 1900 he finds that the overall decline in murder cases was composed of two trends: the rate of wife murder remained more or less stable while there was a disproportionate decrease in murder other than wives – overwhelmingly situations of men killing men.

Secondly, a disproportionate part of the decline was due to a reduction amongst victims aged 20–29 and 30–39. In Switzerland, for example, mortality statistics show a distinctive age curve for male victims in the 1875–84 period. The risk was highest in the 20–29 age group with a homicide rate of 7.1 per 100,000 and declined with increasing age to about 3.1 in the 60–69 age-group. Looking at male victimization eighty years later (1955–64) one can see a massive decline for all age groups, but by far the greatest decline amongst younger men. Amongst men at ages 20–29 the homicide rate was now a mere 0.4 per 100,000, which equals an astounding reduction by 94 percent over the period.

Data on more countries would be important, but I hypothesize that they would corroborate the same underlying trend: the bulk of the decline across Europe was a reduction in young men getting killed (Verkko 1967). What happened was primarily the pacification of interactions between male non-relatives in the public sphere. Across Europe, this change comes in different guises and affects various manifestations of interpersonal violence. In the south of Europe, rural banditry was still endemic in the mid-nineteenth century. It was widespread, for example, in the rural-pastoral societies of Sardinia, Sicily, Corsica, and Greece (Gallant 1997, 2000; Wilson 1988). In these areas, banditry was associated with other manifestations of violence, in particular feuding and blood revenge, themselves part of a culture of honour. By 1950 such manifestations of an archaic code of honour had not completely disappeared, but their occurrence had become massively reduced.

North of the Alps the code of honour, feuding and revenge already belonged to a relatively distant past by the mid-nineteenth century. However, there were other spheres of public interaction where violence was still common round the mid-nineteenth century and disappearing over the course of the long-term decline. Probably the most visible sphere here is public enjoyment. Prize fighting, for example was a common sport amongst working-class Englishmen in the first half of the century that became increasingly controlled and eventually eliminated as the century went on (Wiener 2004). Football, along with various other male sports, only gradually became the rule-bound game we

know today. Also, male fights and brawls related to alcohol consumption declined throughout Europe.

Interpretive issues. Several authors have already described the decline in criminal violence and homicide across Europe during the second half of the nineteenth and the first half of the twentieth century (Chesnais 1992; Gatrell 1980; Gurr 1976; Hofer 1991). Although the details of precisely where, when, and why it occurred are still poorly understood, researchers agree that it was a remarkable phenomenon that requires an explanation.

It is worth recalling at this point that the drop in homicide rates is set within a period of enormous social and economic change (for statistical indicators see, e.g. Flora et al., 1983). In 1850 most people across the continent were still working in agriculture, few cities had more than 100,000 inhabitants, and transportation of people or goods over land was mainly by foot, cart, or coach; large parts of the population constantly faced absolute poverty and struggled to produce enough to feed their families; 10–25 percent of newborns died within a year and average life expectancy was around forty, barely above the average typical throughout the early modern period. One hundred years later Europe was a different world in almost every respect: most people now lived in cities and the tertiary sector was about to overtake employment in the industrial sector; trains and cars had revolutionized transport while radio and telephone had annihilated distance as a barrier to communication; life expectancy was close to seventy and infant mortality was reduced to 2–3 percent.

Never before in human history had people been exposed to such a relentless stream of technological, economic, and social change; and there was no precedent to the modern society that emerged out of it. Would it not be plausible to assume that humans would react with increased interpersonal violence to the resulting strains? We know that they have not. None of the putative side-effects of industrial modernity – the loss of cultural traditions, the knowledge revolution, the growth of cities, migration, or repetitive factory work – had a noticeable negative effect on criminal violence. If anything, modernity was associated with decreasing homicide.

For these reasons some older versions of modernization theory which assume that the long-term dynamics of modernization and urbanization necessarily bring about social disorganization, alienation, and anomie (which in turn breeds crime) can be discarded, because they make predictions in the wrong direction (Clinard and Abbott 1973; Szabo 1960). Shelley (1981) in contrast, has developed a more complex criminological modernization theory. In a nutshell, she argues that violent crimes only rose during the most unsettling early stages of industrialization (i.e. before about 1840), but ceded their pre-eminent place to property crimes as the recently arrived rural migrants adjusted to city life (Shelley 1981, 36). Yet, as she notes, many types of property crime also seem to have declined throughout the second half of the nineteenth century (1981, 37). Also, to say that the decline of violent crime demonstrates the accommodation of the urban population to the forces of modernization perhaps begs the question rather than providing a true answer.

Also, we can probably reject more mechanistic implications of criminological opportunity theory – which assumes that the number of motivated offenders can be held constant and that crime levels are mainly influenced by the opportunities a society offers (Felson 1987). The reason is that several important potential drivers of violence in public space – income that can be spent on alcoholic beverages, low social control in anonymous city centres, and the amount of leisure time available for “risk” activities – certainly became more plentiful as the century progressed. A more complex argument about the effects of macro-level change on situational dynamics has been developed by Kick and LaFree (1985; also see LaFree and Kick 1986), who argue that modernization draws people outside the potentially conflictive environment of the family and primary relations, hence reducing the likelihood of murder. Yet one should probably expect that such a dynamic would result primarily in the decline of family homicide, while the empirical data suggest that most of the drop occurred amongst young men fighting each other.

Finally, there is little to suggest that increased state social control such as policing, deterrence, or imprisonment caused the sustained downturn in violent crime. Police

forces did become larger and more professional from the 1850s to the 1950s, but they were still small in comparison to the standards of the later part of the twentieth century when criminal violence soared. Also, the main trend in punitive policies during the period was towards less imprisonment (e.g. for England and Wales and the Netherlands see Downes 1989), less capital punishment, and more re-integrative reformation (Emsley 2007; G. Rose 1961).

Ultimately, in my view, the most convincing explanation assumes a leading role of culture. What provides unity to the period from 1850 to 1950 and can plausibly explain the long-term decline in male-to-male public violence is the diffusion, throughout Europe, of a cultural model of the conduct of life, reinforced and reproduced through social institutions (Gay 2001). This model includes three main elements: an emphasis on *self-control* as an ideal of personality; *domesticity and familialism* as guidelines for private life; and *respectability* as the yardstick for public appearance.

Self-control was probably the most pervasive element of the nineteenth century model of the conduct of life. It included the gospel of thriftiness, diligence, frugality, sobriety, order and, cleanliness. It was a theme that was reiterated by parents and teachers and resounded through schools, churches, labour unions, and the abundant advice literature (Gay 2001). It can be easily seen how and why self-control contributed to reducing male-to-male violence. For one, to the extent that self-restraint was inculcated in boys and young men through a variety of socializing institutions, their propensity to act impulsively in the face of provocation or frustration declined. Also, self-control was the guiding theme behind the successful efforts to reduce the consumption of alcohol. In Sweden, per capita alcohol consumption halved between the 1860s and the 1930s (Willner 2001). Similarly, alcohol consumption fell significantly in Switzerland from the 1870s onwards, particularly the consumption of massive amounts of spirits amongst the working poor during weekends. Finally, as Wiener points out, forethought, reasonableness, and command over oneself were the core qualities of the rising ideal of the “man of dignity” who replaced the older ideal of the “man of honor” (2004, 6).

The nineteenth-century devotion to domesticity was many things. Certainly it was an ideological tool to legitimate gender inequality and to confine women to the household. However, domesticity also fundamentally transformed notions of masculinity (Tosh 1999). In particular, the ideal of a harmonious family life, reiterated in nineteenth-century advice literature, crucially included the notion that men and women should root their identities in the family and the upbringing of children. It emphasized that consistent and caring parenting was essential, that men should refrain from beating their wife or their children, and that they should devote their time outside work to promoting the happiness of the family.

The third element was respectability and fear of embarrassment (e.g. Huggins 2000). Although related to self-control, respectability was more about the impression one made on other people. Importantly in the context of violence, respectability was the principal code that regulated interaction in public places (Croll 1999). In particular, respectability constrained behaviour in the expanding area of leisure time whether in middle class arenas such as seaside resorts and racing grounds, or working class activities such as football or gymnastics (Walvin 1978).

Of course this model for conducting life was not a monolithic phenomenon. It differed between classes, changed over the decades, and had varying nuances in the respective national discourses. However, it can easily be recognized as a distinctive code over the century, it powerfully moulded the working of social institutions such as schools and the family, and it effectively influenced the way people acted and expected to act in public space.

Finally, it seems worth mentioning as an aside that the decline in homicide cut through all the political faultlines and catastrophes of the century: it occurred similarly in democracies, monarchies, and authoritarian regimes; it continued through dramatic political change in the history of countries like Ireland, Italy, or Spain; and it also cut through the atrocities of the two world wars and the mass killings by the Nazi regime. This observation means – and this is a normative rather than a theoretical thought – that we should probably not equate declines in interpersonal criminal violence with civility in a wider normative sense. Disturbingly, populations in which fighting, feuding, and criminal killing are very unlikely can nonetheless support and engage in denunciation, deportation, and mass-killings (Goldhagen 1996; Johnson 2000).

5. 1960 to 1993: The years of increase

By around 1955 the double trend of decline and convergence comes to a halt and for about a decade homicide levels are very low across Europe before they start to rise again. Before commenting on the increase and its possible causes it is useful to more closely examine the timing of the trend reversal and the overall extent of the increase. To this goal mean homicide rates were computed for each country, for all overlapping five-year periods after the end of World War II (i.e. 1950–54, 1951–55, 1952–56, etc.). In a next step the five-year periods with the lowest and the highest average homicide rates were identified. Averages were computed because they reduce the impact of annual fluctuations and thus give a clearer picture of the main pattern. Table 4 shows the periods with the lowest and the highest homicide rates as well as the relative increase between the trough and the peak of the respective series.

Table 4: Lower and upper turning points of homicide rates, 1945–2004, sorted by homicide rate at lower turning point

	Lower turning point		Upper turning point		Increase, low to high
	Year	Rate	Year	Rate	
Netherlands	1957	0.32	1995	1.26	294%
Ireland	1957	0.34	2001	1.43	321%
Norway	1953	0.35	1989	1.30	271%
Denmark	1960	0.49	1994	1.26	157%
France	1953	0.55	1985	1.80	227%
Scotland	1955	0.56	1995	2.34	318%
England and Wales	1961	0.60	2003	1.69	182%
Belgium	1962	0.63	1996	1.82	189%
Sweden	1960	0.64	1991	1.38	116%
Switzerland	1968	0.64	1992	1.42	122%
Italy	1968	0.86	1991	2.26	163%
Germany	1955	0.94	1972	1.29	37%
Austria	1966	0.97	1985	1.50	55%
Finland	1966	2.04	1996	3.25	59%
Average	1960	0.71	1992	1.78	179%

Note: Lower turning point computed as the lowest average homicide rate over a five-year period, year shown is the middle year of the period.

The data show that in each country a long-term low of homicide rates was reached sometime between the early 1950s and the late 1960s, with a cluster of lower turning points between 1957 and 1966. During these years, several countries had sustained periods with rates significantly below 0.5 per 100,000. This includes Norway (homicide rate of 0.35 per 100,000, 1951–55), the Netherlands (0.32 per 100,000, 1955–59), Ireland (0.34 per 100,000, 1955–59), and Denmark (0.49 per 100,000, 1958–62). Rates in Sweden, England, Scotland, and Switzerland were only marginally higher.

These rates are quite remarkable. They represent the lowest levels of criminal killing documented in Europe since the start of written records eight hundred years ago and may well be the lowest rates ever recorded anywhere in the world. To compare them with contemporary rates, one should additionally take into account that they include a comparatively large proportion of infanticides and were achieved with far less efficient medical technologies. Considering both factors, these rates probably correspond to a benchmark of about 0.2 non-infant homicides per 100,000. This is equal to roughly a fifth of current levels in western

Europe and twenty times less than contemporary homicide rates in the United States (5.6 per 100,000 in 2006, see Bureau of Justice Statistics, <http://www.ojp.usdoj.gov/bjs>).

Although a handful of criminological studies have examined why some societies have little crime (Adler 1983; Clinard 1978), none appears to have looked at how these northern European countries managed to keep homicide significantly below 0.5 per 100,000 during the 1950s. Based on the previous argument, my hypothesis is that its cornerstone was the successful generalization across class boundaries of a cultural model of conducting life that combined self-constraint, familialism, and the pursuit of respectability. Its corollaries were high integration and trust (Clinard 1978), a sense of civic responsibility embedded in moral individualism (Dicristina 2004; Durkheim 1957), and a system of reintegrative informal social control, possibly in part related to the relative smallness of the countries (Adler 1983; Braithwaite 1989). Mortality statistics for this period show where this model made the biggest cuts: homicide rates for young male victims were as low as those for all

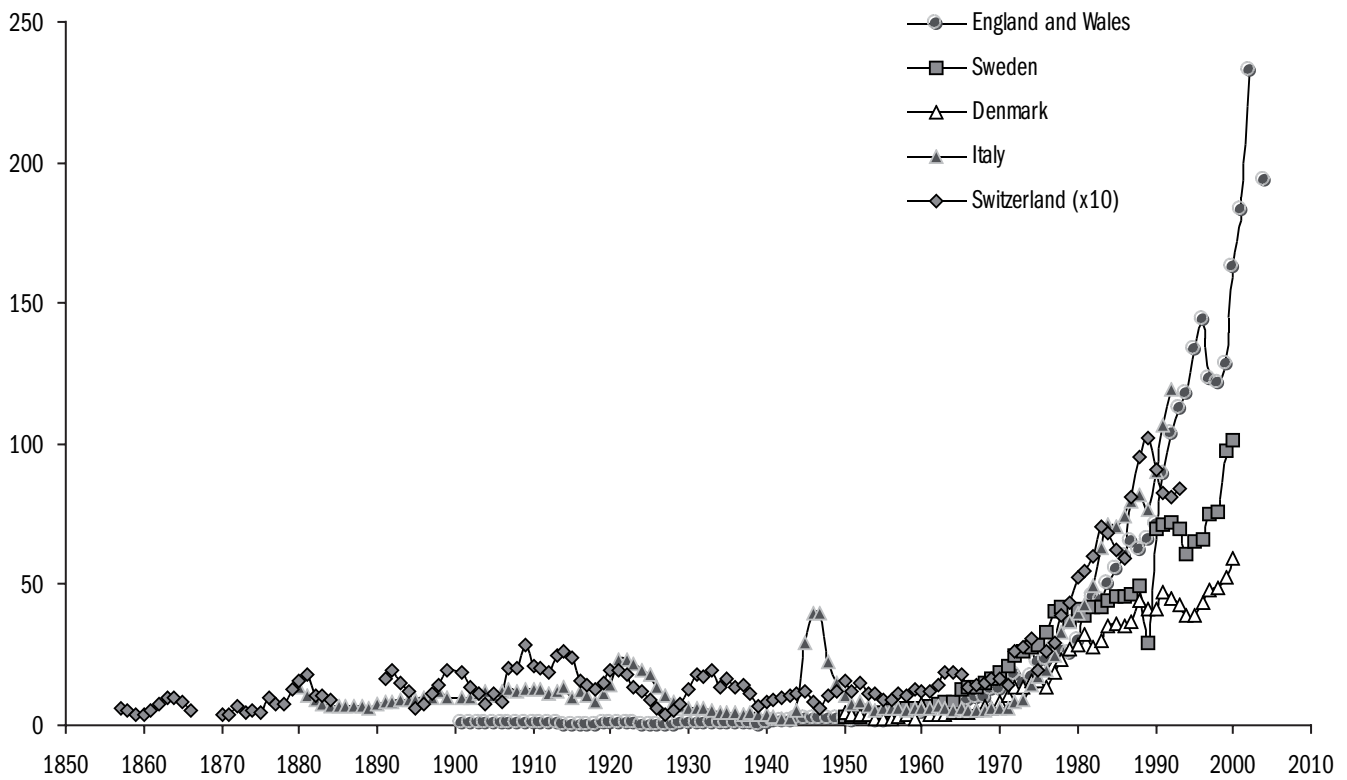
other age groups, while serious male-to-male violence was virtually absent.

But then things begin to change. From about 1960 onwards every series included in this analysis starts an upward trend that continues until the early 1990s (see also Thome and Birkel 2007). The average increase during this period was in the order of 100–150 percent, but the data in Table 4 also suggest a stronger surge in those countries that had the lowest homicide rates in the 1950s or early 1960s.

It is tempting to compare this increase to levels of deadly criminal violence in earlier centuries. This leads to the conclusion that a change from 0.7 to 1.4 killings per 100,000 inhabitants is almost negligible if compared to rates of

30–60 per 100,000 in the late Middle Ages (e.g. Eisner 2003; Spierenburg 2001). However, this is only true if counting criminal killings is our sole interest. Yet if we think of homicide as an indicator for wider levels of violence, then long-term and short-term progress in technologies of healing should be borne in mind. In particular, wound treatment with antiseptics (from about 1900), the use of antibiotics (from the 1940s), progress in the treatment of blood vessel injuries, and accelerated access to treatment thanks to better transportation reduced the lethality of injuries. This may be one of the reasons why homicides increased less than other indicators of criminal violence. For robbery, for example, things are more dramatic. Consider Figure 2, which shows trends in police recorded robbery rates for England and Wales, Sweden, Denmark, and Italy.

Figure 5: Robbery rates per 100,000 population for five European countries



Sources

- England and Wales: Police recorded robbery, Home Office, ed. Criminal Statistics, various years.
- Sweden: Police recorded robbery, Nordic Criminal Statistics (Hofer 2003b).
- Denmark: Police recorded robbery, Nordic Criminal Statistics (Hofer 2003b).
- Italy: Police recorded robbery, Istituto Nazionale di Statistica (2004)
- Switzerland: Convictions for robbery, Canton of Zurich only (Eisner 1992).

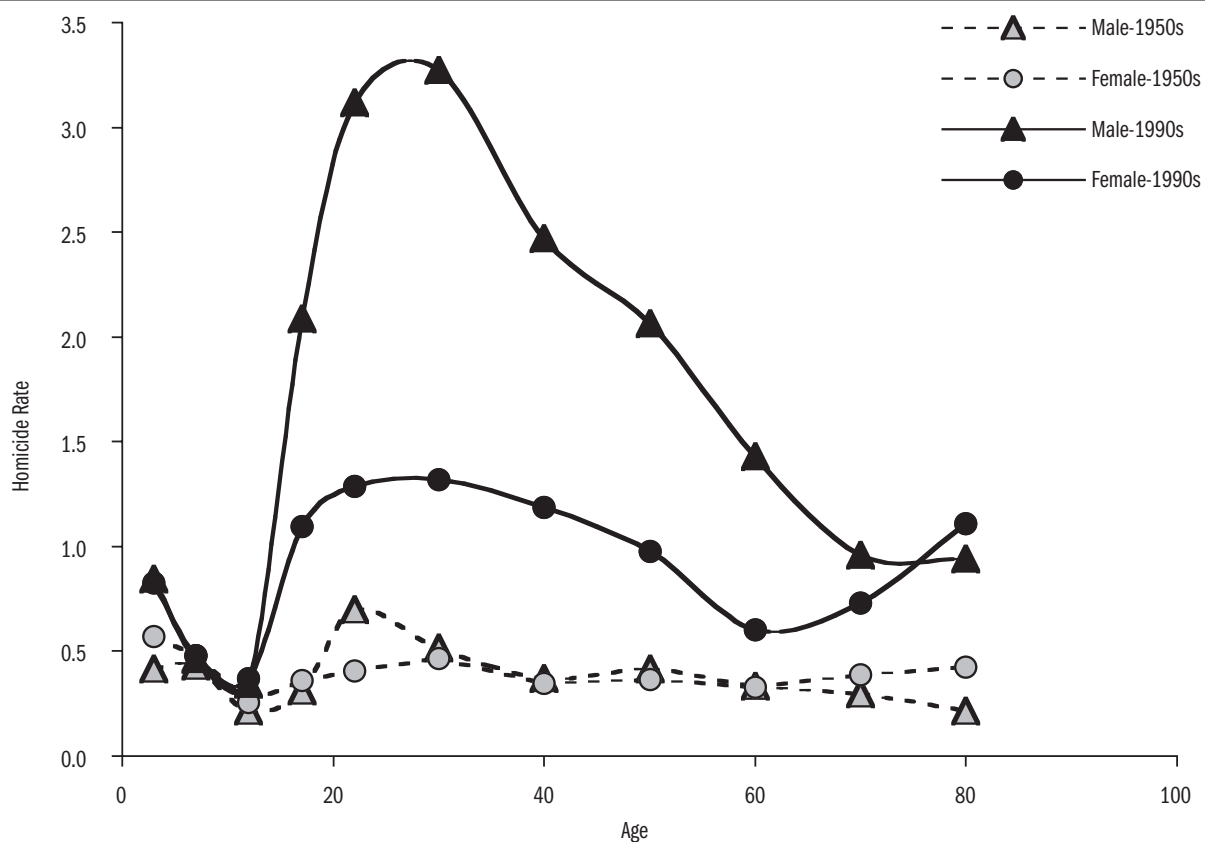
The figure illustrates that robbery was largely unknown in European cities throughout the second half of the nineteenth century and the first half of the twentieth century. But since the early 1960s the number of police recorded robberies has exploded. Maybe this can in part be attributed to more reporting and better recording, but a large proportion certainly reflects a real change that is unparalleled in the history of modern European society.

Even more than during the period before 1950, the course of homicide rates is essentially a phenomenon in which the boundaries of nation states are all but irrelevant. As far as homicide is concerned, the “European unification” is already complete by 1950. One way to express this similarity statistically is to compute the amount of variance in national series that is represented by the joint European trend.

Respective figures show that with two exceptions (Finland and France, the latter because of the increased levels of homicide during the Algerian War) about 40–60 percent of the variation are represented by the joint trend.

But the mere similarity in overall trends is not the only thing that is common across all countries. There is also sweeping correspondence in the types of homicide that became more frequent. Again, detailed mortality data prove to be helpful. They show that the increase was an increase in male victimization rather than female victimization and particularly an increase amongst younger people. To illustrate these changes Figure 6 shows the age distribution of male and female non-infant victims of homicide in England and Wales during the 1950s and the 1990s.

Figure 6: Homicide victimization rates by age in 1950–59 and 1990–99, England and Wales, non-infant death



Source: Home Office (various years), Criminal Statistics for England and Wales.

Notice, first, that the age curve during the 1950s was characterized by the virtual absence of any peak during early adulthood and no gender difference in the victimization risk. By the 1990s, this had changed dramatically. The increase was stronger for male than for female victims and more pronounced for young adults. Amongst men aged 20–40, the risk of being a victim of criminal homicide rose five- to sevenfold during this period. Corroborating evidence comes from the Criminal Statistics of England and Wales (Home Office, various years), which since 1969 have included tables on the relationship between offender and victim. They show revealing differences: A moderate decline in family homicide, a moderate increase in homicides against acquaintances, and a massive eightfold surge in homicides against strangers (from about fifty cases around 1970 to about 400 cases around 2000. For a similar finding in Stockholm see Wikström 1992).

This leaves us with the conclusion that the notion of increasing violence since the early 1960s misses the point. Rather, disaggregation reveals different trends for different types of violence (for a similar observation see Blumstein and Rosenfeld 1998): Across Europe infanticide continued to decrease throughout the period; also, family homicides did not increase and probably were slightly decreasing; what soared dramatically, though, were killings that involved men, predominantly in public space. One may think of fights between youth gangs, armed robberies, conflicts between drug addicts ending in a knife being pulled, or simple pub brawls going wrong.

There are certainly gaps in the data presented here. But despite undeniable shortcomings they suggest a remarkable symmetry between the decline in 1850–1950 and the increase from about 1960–1990. While the decrease occurred mainly because fewer men killed each other in public space, the surge since the 1960s primarily resulted from soaring numbers of young men getting killed in public space by people they hardly knew.

Interpretive issues. This descriptive summary leads back to the question of plausible explanations: what could have caused the almost simultaneous rise, across Europe, of

lethal violence between young men? Let me again start by eliminating a number of candidates.

First, it seems difficult to see how any version of deprivation theory could work. Take the example of Jock Young's *Exclusive Society* (1999), one of the most elaborate attempts at explaining the increase of crime in late modernity from a structural perspective. Basically, Young argues that the increase was linked to the "crisis" of the post-war "Fordist" regime of production, which had provided stable employment combined with a welfare state that furnished social protection "from the cradle to the grave". That model was replaced by a post-Fordist mode of production characterized by unstable employment for many, a devaluation of manual labour, increasing disparities in income distribution, and a dismantling of the welfare state. It created social exclusion, which, in turn, propagated frustration, resentment, and reactive violence on the part of the excluded (for a critical discussion see Yar and Penna 2004).

There are several problems with this argument. First, it implies a degree of stability and inclusion of the "Fordist" regime that hardly stands up to historical scrutiny. If anything, late nineteenth and early twentieth century workers were significantly less protected from the vagaries of economic change than late twentieth century working classes, yet nonetheless homicide continued to decline through the protracted Long Depression of 1873–96 and the Great Depression of the 1930s. Also, why did violence and crime start to increase more than a decade before the first oil crisis of 1973, which triggered a deep economic crisis across the world economy? Finally, increasing social inequality and the dismantling of the welfare state since the late 1970s were very much phenomena linked to the political history of the United Kingdom and the United States, but violence similarly increased in Sweden, Denmark, and Switzerland, where there is no evidence for increasing income inequality and where the welfare state remained intact – or was extended – during the relevant period (Alderson 2002).

Another group of explanations attributes the increase of criminal violence to an "excess" of modernity, meaning that violence is caused by the pathologies of modern society. There are materialist and culturalist versions of

this argument. The scholar best known for the materialist version is Charles Murray (1984, 1994). He basically argues that the expansion of the welfare state symbolized by the Kennedy years in the United States started to give away too much to too many. The consequence was that a dependency culture developed, that the work ethic eroded, and that family values crumbled. Over the years this led to the growth of a socially irresponsible “underclass”, whose growth is visible through two main indicators: the rise in violent crime amongst young men and the rise of illegitimate births among young women. The problem with this argument is that there was a lot of variation – over time and between countries – in the expansion of the welfare state since the 1950s while the trends in homicide rates are so surprisingly similar. Also, it is hard to see why the rise of the “underclass” should only have affected street violence while domestic homicides probably continued to decline.

The culturalist version is essentially about too much individualism, too much materialism, and too much egoism. Two well-known versions are *Crime and the American Dream* by Messner and Rosenfeld (1994) and *The Great Disruption* by Fukuyama (1999). Similarly, Thome and Birkel (2007) have recently argued that over the past decades structural factors have promoted a disintegrative individualism at the expense of an older model of cooperative individualism.

The Great Disruption is particularly interesting in this context because there is some overlap with the argument developed here. Fukuyama correctly observes that the simultaneous rise in indicators of crime and violence across all Western societies precludes explanations that rely on national politics. I also concur with his analysis that deprivation-based explanations are implausible. And I agree with him that the decay of the Victorian model of selfhood based on restraint, domesticity, and respect was an important element in the story and that it contributed to the increase in male-on-male violence since the early 1960s.

However, I believe Fukuyama is imprecise in what he identifies as the underlying cultural shift. Informed by the communitarian ideas developed by Etzioni (1993) Fukuyama argues that the “great disruption” was caused by a

dramatic swing towards “excessive” individualism that corroded virtually all forms of authority and weakened the bonds holding together families, neighbourhoods, and nations. Conceptually, however, the notion of “excessive” individualism remains vague and the empirical question of how much individualism is “excessive” is unanswered. Also, why it should lead to more crime and violence is rather unclear. For example, Fukuyama sees the main characteristic of excessive individualism in the “preoccupation with one’s private life and family” to the detriment of engagement in public affairs, hardly the standard characteristics that criminologists would associate either with parents of problematic adolescents or with people at risk of committing violent offences. However, there is no doubt that the period of the late 1950s and early 1960s saw a fundamental shift in culturally transmitted values that fundamentally altered views about how to conduct life and how to interact in public space.

There are two concepts in the toolbox of cultural sociology that may be better able to capture the nature of this transition. Both have been developed in and with a view to the United States, but both describe the cultural shift equally well in Europe. The first is the notion of a transition from the “inner-directed” to the “outer-directed” character developed by Daniel Riesman. In his best-selling book *The Lonely Crowd* – first published in 1950 – Riesman documented the transition from the ideal inner-directed self, deeply rooted in the commitment to work and occupation, to an imagery of the outer-directed self associated with affluent society. The outer-directed self is dependent on the opinion of others, is anxious to be loved and accepted, needs excitement, pleasure and consumption to find fulfillment. This pessimistic story of the “lonely crowd” reunited in mass consumption is retold in many sociological accounts of the changing conception of the self in the decades of the 1970s and 1980s. Most prominent are the accounts offered by Bell (1976), Sennett (1977), and Lash (1978). Although arguing from different theoretical vantage points, these authors come to the conclusion that the inner-directed, self-contained, and disciplined self has rapidly vanished and lost its significance as the guiding cultural ideal. According to their views, the cultural notion of the

self as endowed with *character* has been corroded (Sennett 1998) giving way to the glorification of *fluid identity*.

The other element that begins its rise in the cultural landscape of the 1950s is what Bellah et al. (1985) called *expressive individualism*. Its core element is self-actualization, the goal of expressing one's own unique nature, emotions, and desires, while at the same time reducing the emphasis on observing society's rules and constraining one's own impulses. They argue that the cultural model of the expressive self greatly emphasizes the deeper expression and cultivation of the self, which articulates the inner world of feelings and emotions, emphasizing virtues such as sensitivity, emotionality, authenticity, openness, and empathy. In a similar vein, but with even more obvious ties to criminological thinking, Turner (1976) argued in the mid 1970s that the dominant cultural code of the self has shifted from what he labels the "institutional self" to the "impulsive self", making the potential link to our theme even more evident. Under the institutional locus of the self, the real self is revealed only when the individual is in full control of its faculties and behaviours. Rules that govern interaction in public space are as perceived resources and failure to adhere exposes moral imperfection. Under the cultural code of the impulsive self, in contrast, institutions are external, artificial constraints and the true self is revealed only when inhibitions are lowered or abandoned (Turner 1976, 993).

Many of these broad cultural shifts are well documented empirically, although there are hardly any quantitative indicators. They are evident, for example, in the rapid spread of distinct youth subcultures across Europe starting in the mid 1950s (Fyvel 1966; Kurme 2006; Marvick 1998). It is amongst the teddy boys, mods, rockers and hippies where the rise of an expressive self seeking for true fulfilment outside the oppressive rules of society and anchored in excitement, consumption, and pleasure finds its purest expression. The gang in *A Clockwork Orange* – written by Anthony Burgess in 1962 – that commits crime for pure enjoyment epitomizes this new culture. It is certainly not primarily individualistic. Quite to the contrary it appears, from the vantage point of the moral individualism that Durkheim had in mind, primarily anti-individualistic, condoning masculinity and its code of honour – a remarkable

return to some patterns that were associated with violence around 120 years before.

Epilogue: 1993 to present – Back to the civilizing trend?

It is well known that in the United States the year 1992 constitutes a major turning-point as regards the frequency of homicide. In 1992, the United States experienced a peak rate of about 10 homicides per 100,000 including particularly high victimization rates among teens and young adults (Blumstein 2000). Since then the United States have experienced a much-debated decline in violent crime including a drop in homicide rates by more than 40 percent and a current rate of about 5.6 per 100,000 (roughly five times the current average rates in most western European countries).

However, while the crime drop in the United States has received a lot of public and academic attention (e.g. Blumstein and Wallman 2000), few observers have noticed that a very similar change has occurred in Europe. Consider the data shown in Table 4 above. They demonstrate that in many European countries homicide rates also reached a peak in the late 1980s or early 1990s and that the mean year of the upper turning point is precisely the same as in the United States, namely 1992. Since then, homicide rates in most European countries have been falling, in some cases quite dramatically. In Austria, the mortality statistics suggest a fall in the homicide rate by 62 percent from 1.49 in 1992 to 0.55 in 2003. Germany had a similar decline from 1.18 in 1992 to 0.63 in 2003. Italy counted over 1,600 violent deaths in 1991 (homicide rate of 2.84 per 100,000) dropping to a mere 550 in 2001, a decline by over 60 percent (Piacenti 2005). Declining trends can also be found in France, Switzerland, Portugal, and across Scandinavian countries, while the British Isles with increases continuing in England and Wales, Scotland, and Ireland are the major exception.

It is tempting to extrapolate the interpretive sketch developed on the preceding pages to this most recent change in the long evolution of homicide rates. Especially as we are looking at a phenomenon that transcends national borders yet again. The years between 1990 and 1993 were a watershed as regards homicide rates across the Western world. They started declining in the United States, but they did the same across much of Europe with the notable exception of

the United Kingdom and Ireland. Similarly, homicides rates have been declining since the late 1980s in Australia (from a peak of 2.3 in 1989 to 1.3 in 2005, see Mountzos 2003) and in Canada (from 2.6 in 1992 to 1.8 in 2004). The extent of decline differed and it is relevant to ask why these differences exist. But this does not detract from the main argument developed throughout this paper, namely that the primary unit of analysis for the kind of questions addressed in this paper must be the Western world. Also, I find many of the more conventional explanations offered in the criminological literature rather unconvincing. The similarity of trends across the Western world, for example, makes discussions of how the merits or faults of American criminal policy caused the drop in violence look rather parochial (Blumstein and Wallman 2000). Finally, the recent drop in homicide does not line up well with economic success or failure. Homicide rates continued to increase over the last fifteen years in England, Scotland and Ireland, where unemployment dropped significantly, while homicide went down in France and Germany where unemployment levels remained high.

Wherever the decline occurred, my guess is that it was primarily a decline in male-to-male homicides between strangers or acquaintances. And my favourite candidate for explaining the downturn would again be culture, the only phenomenon that travels fast enough to affect such vast areas roughly simultaneously. More specifically, I would look out for a manifest shift in culturally embedded images of conducting life, for example, in changed ideas of how to bring up children well. Such change is visible, for example, in the resurgence of good parenting as a major domain of prevention research and policy, in a partial shift of parenting values towards re-emphasizing self-control and respect, it can be traced in changed attitudes towards drugs, which have lost their revolutionary aura, and it is manifest in a greater emphasis on discipline, respect, and responsibility as guiding principles in primary and secondary education.

Conclusions

The main interest of this paper was whether an explicit macro-level and long-term perspective can add anything to the question of what caused the increase in criminal violence in most European countries during the second half of the twentieth century. Looking at trends over 160 years

for up to sixteen countries this study found three broad empirical patterns that have a bearing on the range of plausible generalizing explanations.

First, the findings suggest that very low rates of homicide found across most of Europe during the late 1950s, when the period of sustained increase begins, should probably be seen as a rather exceptional phenomenon. Any attempt at explaining the trend of increasing violent crime from the early 1960s onwards thus probably needs to entail some understanding of how the uniquely low homicide levels of the 1950s came about. The findings presented in this paper suggest that they may have emerged as the result of a century-long dynamic that probably started in around 1850, can be summarized as the twin trend of decline and convergence, and was surprisingly unaffected by major economic crises or the political catastrophes of a very troubled century.

Secondly, the data presented in this paper suggest that some previous explanatory approaches may have significantly overestimated the importance of national-level endogenous forces such as national welfare and criminal justice policies or the national specificities of demographic change and migration patterns. More specifically, this study found that both the lower and the upper turning points in violence trends across Europe were surprisingly synchronized with many national series only deviating a few years from the mean year of the lower (1960) and the upper (1992) turning points. Furthermore, it was pointed out that the early 1990s emerge as an upper turning point in homicide rates – followed by at least ten years of sometimes significant decline – not only in Europe, but also in the United States, in Canada, and in Australia. Highlighting these surprising similarities does not imply that nation states and their political idiosyncrasies are completely irrelevant. However, the findings presented in this paper do favour an analytic perspective that gives logical precedence to the temporal variation that is shared within large geo-cultural units (e.g. north-western Europe in the nineteenth century, affluent Western societies since the 1950s, etc.) and then considers nation-states as special cases within a broader picture.

Thirdly, this paper presented additional evidence on an empirical regularity initially found by Verkko (1967) whose

theoretical significance may not yet have been fully appreciated. More specifically, analyses of victim characteristics suggest that an over-proportional part of the decline in homicide rates during the nineteenth and early twentieth century may have been due to a reduction in the deaths of young men, and that, symmetrically, an over-proportional part of the increase since the late 1950s was due to an upsurge in killings of young men. Although more thorough data would need to be collected to fully document this pattern this paper hypothesizes that most of the long-term variation in overall homicide rates is due to male-on-male conflicts in public space. If confirmed by more data, this would suggest that a theoretical explanation of the increasing levels of criminal violence would need to focus on how Western societies regulated the interaction between young men in public space.

Overall, this paper thus suggests that an elegant theory of the increase in deadly interpersonal violence during the second half of the twentieth century should also be able to account for the declining trend that prevailed through most of Europe during the century before 1950, that it should be able to explain the coincidence in lower and upper turning points across the continent and beyond; and it should be able to elucidate the disproportional contribution of conflicts between young men to the grand fluctuations in homicide rates.

Of course, there are many possible theories that can account for these three observations. This paper tentatively suggests a perspective that builds on Max Weber's notion of culturally embedded models of *Lebensführung*, reinforced and reproduced through social institutions. It proposes linking the major fluctuations in homicide rates to change in norms and expectations about how young men interact in public space. But without any doubt such a suggestion paves the way to many new questions, unaddressed in this paper, not the least of which is whether such a theoretical perspective could be moved beyond the level of speculation and be subjected to more rigorous empirical tests.

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Appendix

Data Sources

This appendix documents the main data used for the History of Violence Database and the respective sources.

Austria. There is a series of convictions for completed murder and manslaughter from 1862–1887 based on tables in the *Österreichisches Statistisches Jahrbuch* and published in Bosco (1889). From 1924 to 1936 I use the data published in Hacker (1938) that are also based on conviction statistics. From 1947 onwards data are based on the death statistics as published in the WHO tables.

Belgium. From 1870 onwards the *Annuaire Statistique de la Belgique* has published the number of victims of homicide as counted in the national death statistics. From 1980 data are based on the WHO death statistics (identical to the national death statistics).

England and Wales. England and Wales have two major national systems for registering homicides, namely the causes of death statistics and the police statistics. Except for minor divergences both series have always been very close. For the total homicide rates displayed in Figure 1 through 5 I rely from 1857 on the number of police recorded homicides. Gattrell (1980) presents an earlier series of homicide rates covering the period 1834–56. For the period from 1967 onwards the data used here refer to the number of cases “initially recorded as homicide”. A proportion of these cases will eventually be found not to have been a homicide and the Home Office statistics regularly update their data base as to the final outcome of the police investigation. However, the series of initially recorded homicides seemed to be more compatible with the data covering the period before 1967. The figures for victims of intentional killing by sex and age group have been published in the *Annual Report of the Registrar General* since 1857 (Registrar General, 1837ff). Furthermore, the National Crime Statistics publications regularly include a separate section with detailed analyses of the circumstances of homicides and the demographic backgrounds of offenders and victims.

Finland. Finland and Sweden have the oldest national causes of death statistics in the world, going back to 1754.

The data on infanticides and male and female non-infant victims for 1754–1944 were published by Verkko (1951). Data for subsequent years up to 2003 are also based on national death statistics compiled by Statistics Finland and made available to me by Martti Lehti (e.g. Lehti 2001).

Germany. The earliest series used here is the series published by Starke (1884) on persons accused of murder, manslaughter or infanticide in Prussia from 1854 to 1873 (which is virtually identical to the series presented by Ferri in *Lomicidio-suicidio*). From 1873 to 1914 I use the number of homicides recorded in the causes-of-death statistics for Prussia. Johnson (1995) published the full series up to 1914. Data since 1947 are based in the national causes of death statistics published in the WHO volumes. There is a gap in the series between 1914 and 1947.

Ireland. O’Donnell (2004) has done pioneering work on the development of homicide and infanticide rates in Ireland, discussing, inter alia, the various sources and possible methodological problems. The series is based on various sources but primarily relies on crimes known to the police from 1841–1919 and 1947–2003 while relying on the Registrar General’s mortality statistics for 1935–1946. I am grateful to Jan O’Donnell for having given me access to the data. Data include a separate series on infanticides and a series of non-infant deaths. The “homicide” series used here includes both.

Italy. Italy has a complete series of police recorded homicides called “Delitti denunciati per i quali l’Autorità giudiziaria ha iniziato l’azione penale” published in the Italian justice statistics. An overview for 1872–1955 can be found in the *Summary of Historical Statistics* by the Istituto Centrale di Statistica (Istituto Centrale di Statistica, 1958). Later years are recorded in the annual judicial statistics (Istituto Nazionale di Statistica, 2000) It should be borne in mind that this series also includes attempted homicides. To correct for inflated levels of the police statistics I also collected a series of homicide victims as recorded in the national causes of death statistics and reported in the WHO publications. Comparison of the death statistics and the police statistics for the 1947 to 2000 period suggest that both series are highly correlated ($r=0.90$). A regression analysis

revealed that the police series includes 59 percent attempts and that this fraction has remained basically stable over the comparison period. I hence decided to use the police series over the whole period but to correct for the inclusion of attempts by multiplying by a constant conversion factor of 0.41 over the whole period.

France. France has national causes of death statistics with separate figures on homicide from 1925 onwards. Detailed data by sex and age category are available online at <http://www.ined.fr/bdd/causfra/intro.html> (accessed 24 April 2006) and are discussed by Vallin and Meslé (1996). Data for 1827–1920 are based on the number of accusations at the *cours des assises* and can be found in the *Compte general de l'administration de la justice criminelle en France* (Ministère de la Justice 1832–1930). For the total number of homicides I rely on the series compiled and published by Ferri (1925). The series includes the total number of cases referring to murder (*meurtre*), manslaughter (*assassinat*), parenticide (*parricide*), poisoning (*empoisonnement*), infanticide, and assault leading to death. For cases of infanticide there is a separate series of cases adjudicated by the *cours des assises* covering the years 1826–1963 published in.

Netherlands. From 1900 to 1930 I relied on the convictions for homicide series presented by Archer and Gartner (1984). From 1931 onwards the data used here are based on causes-of-death statistics as presented in the *National Statistical Yearbook* and published by the World Health Organisation. For the period between 1931 and 1972 I also compared both series. Excluding the periods of war (1942–1945) the correlation between both series is 0.74, suggesting a fair validity of the conviction data.

Norway. The data for Norway are based on the national death statistics. From 1876 to 1914 numbers broken down by the sex of the victim were published in the *Statistical Yearbook Norway* published by the Office of Statistics. From

1915 to 1980 I currently only have the grand total. From 1980 onwards data are based on the WHO statistics and broken down by sex of the victim.

Scotland. The series used here is based on the Criminal Statistics for Scotland (known as Judicial Statistics before 1898), for 1847 onwards and refers to the number of completed homicides (murder and culpable homicide) recorded by the police authorities (Home Office 1868ff; for recent overviews see, e.g., Scottish Executive 2005). Like the statistics produced by the Home Office for England and Wales, the Scottish data distinguish between “initially recorded” and “currently recorded” counts since 1978. I use the series of “initially” recorded crimes for comparability with earlier periods.

Spain. The current series for Spain has major gaps. For the 1883–1911 period I rely on the series published by Ferri (1925) and based on the Spanish Judicial Statistics. I then have a series of data based on national death statistics from 1950–2003, originating from the WHO tables.

Sweden. Sweden has the oldest national series of causes-of-death statistics starting in 1754. Series up to 1944 are presented in Verkko (1951). Data for subsequent years are based on the data published in the *Swedish Statistical Yearbook* and the World Health Organisation data. The data have been previously discussed by Hofer (1991; 2003a).

Switzerland. Switzerland has had a national registry of causes of death since 1876. Unpublished tables by the Swiss National Office of Statistics include the number of homicide victims by sex and age group for the period before 1950. For the 1950–2002 period data can also be found in the WHO yearbooks. Killias (1991) first analysed Swiss homicide trends, Bieri (1998) has examined the data quality and analysed the demographic structure of the victims.

Deprivation, Violence, and Conflict: An Analysis of Naxalite Activity in the Districts of India

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Deprivation, Violence, and Conflict: An Analysis of Naxalite Activity in the Districts of India

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This paper asks: is it a fact that there is more violence in districts affected by Naxalite (Maoist) activity compared to those which are free of Naxalite activity? And can the existence of Naxalite activity in some districts of India, but not in others, be explained by differences in economic and social conditions? This study identifies districts in India in which there was significant Naxalite activity and correlating the findings with district-level economic, social, and crime indicators. The econometric results show that, after controlling for other variables, Naxalite activity in a district had, if anything, a dampening effect on its level of violent crime and crimes against women. Furthermore, even after controlling for other variables, the probability of a district being Naxalite-affected rose with an increase in its poverty rate and fell with a rise in its literacy rate. So, one prong in an anti-Naxalite strategy would be to address the twin issues of poverty and illiteracy in India.

1. Introduction

The successful military campaign that Nepal's Maoists waged against the Nepalese monarchy and its political establishment has also drawn attention to the activities of Maoist groups in India (known, collectively, as "Naxalites", after Naxalbari, the district in West Bengal where the first Maoist-inspired insurgency began in 1967). The Indian Home Ministry estimates that 91 percent of violence in India, and 89 percent of deaths arising from violence, are the result of Naxalite action (Government of India 2005, p.39). Moreover, the growth of Naxalite activity in India has been phenomenal: from 55 districts afflicted by various degrees of Naxalite activity in eight states in November 2003 to 157 districts across 13 states in 2005 (Gill 2005). In response to the threat posed by Naxalites, the Indian government set up a high-powered committee—headed by the Union Home Minister and having as its members the chief

ministers of the worst-affected states (Andhra Pradesh, Maharashtra, Madhya Pradesh, Chattisgarh, Jharkhand, Bihar, Uttaranchal, Orissa, and Uttar Pradesh)—to address the problem.

Referring to the workings of this Committee, the Indian Prime Minister, Manmohan Singh, pointed out that Naxalite insurgency should not be viewed as a purely law and order problem: underlying this insurgency, and lending it support, was the social and economic deprivation experienced by a significant part of India's population. For example, as Bhatia observed (2005), a large part of Naxalite activities are, in fact, are "non violent" and that this feature of the Naxalite movement has received little attention. Moreover, many of these open and non-violent activities—*inter alia* meetings, boycotts, marches, road blocks—are in pursuit of basic economic and social rights: for example,

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land rights, minimum wages, right to use common property resources, the right of the “lower castes” to respect and dignity. In consequence, combating Naxalite violence, arguably, requires not just strong police and military action but also effective measures to alleviate political, social, and economic deprivation and injustice.¹

Against this background, this paper, after identifying districts in India in which there is significant Naxalite activity (hereafter, simply “Naxalite activity”), asks two questions: (1) Is it a fact that there is more violence in Naxalite-affected districts compared to districts which are free of Naxalite activity?² (2) Can the fact that Naxalite activity exists in some districts of India, but not in others, be explained by differences in economic and social conditions?

2. Naxalite Activity in Indian Districts

We identified, on the basis of Government of India (2005) and various websites (prominent among which was the South Asian Intelligence Review, <http://www.satp.org/satporgrp/sair/>) 88 districts in ten states in which there was Naxalite activity.³ This estimate lies between a low of 76 districts in nine states (Government of India, 2005) and a high of 157 districts in thirteen states (Gill, 2005). The Naxalite-affected districts we identified are listed in Table 1.

Table 1: Districts in India with Naxalite presence

State	District
Andhra Pradesh	Adilabad
Andhra Pradesh	Anantapur
Andhra Pradesh	East Godavari
Andhra Pradesh	Guntur
Andhra Pradesh	Karimnagar
Andhra Pradesh	Khammam

State	District
Andhra Pradesh	Kurnool
Andhra Pradesh	Mahabubnagar
Andhra Pradesh	Medak
Andhra Pradesh	Nalgonda
Andhra Pradesh	Nizamabad
Andhra Pradesh	Srikakulam
Andhra Pradesh	Visakhapatnam
Andhra Pradesh	Vizianagaram
Andhra Pradesh	Warangal
Bihar	Aurangabad
Bihar	Banka
Bihar	Darbhanga
Bihar	Gaya
Bihar	Jamui
Bihar	Jehanabad
Bihar	Kaimur (Bhabua)
Bihar	Khagaria
Bihar	Muzaffarpur
Bihar	Patna
Bihar	Rohtas
Bihar	Sitamarhi
Chhattisgarh	Bastar
Chhattisgarh	Dantewada
Chhattisgarh	Jashpur
Chhattisgarh	Kanker
Chhattisgarh	Kawardha
Chhattisgarh	Rajnandgaon
Chhattisgarh	Surguja
Jharkhand	Bokaro
Jharkhand	Chatra
Jharkhand	Dhanbad
Jharkhand	Garhwa
Jharkhand	Giridih

¹ The best predictors of civil war were low average incomes, low growth, and a high dependence on primary exports (“The Global Menace of Local Strife,” *The Economist*, May 22, 2003).

² The district is the smallest geographical unit for which a consistent set of data is available. There are 593 districts in India, with a District Commissioner (or District Collector) acting as the administrative head of each district. The median and mean populations of these districts were, respectively,

1.47 and 1.73 million persons: the most and the least populous districts were Medinipur in West Bengal (population: 9,638,473) and Yanam in Pondicherry (population: 31,362). By focusing on districts, the study is able to concentrate attention on pockets of deprivation instead of viewing deprivation as a phenomenon affecting a state or a region in its entirety (Misra 2001; Kurian 2001).

³ Information on Karnataka was obtained from Ramana (2005) and for Tamil

Nadu from Viswanathan (2002).

⁴ Naxalite activity in India is spearheaded by two groups: the Communist Party Marxist-Leninist—People’s War Group and the Maoist Communist Centre of India (Government of India 2005). For details of other groups and their histories see the South Asian Terrorist Portal (SATP), <http://www.satp.org>.

State	District	State	District
Jharkhand	Gumla	Orissa	Nabarangapur
Jharkhand	Hazaribag	Orissa	Rayagada
Jharkhand	Kodarma	Orissa	Sundargarh
Jharkhand	Lohardaga	Tamil Nadu	Dharmapuri
Jharkhand	Palamu	Tamil Nadu	Viluppuram
Jharkhand	Pashchimi Singhbhum	Uttar Pradesh	Chandauli
Jharkhand	Purbi Singhbhum	Uttar Pradesh	Mirzapur
Jharkhand	Ranchi	Uttar Pradesh	Sonbhadra
Karnataka	Bellary	West Bengal	Bankura
Karnataka	Bidar	West Bengal	Bardhaman
Karnataka	Chikmagalur	West Bengal	Hugli
Karnataka	Gulbarga	West Bengal	Medinipur
Karnataka	Kolar	West Bengal	Puruliya
Karnataka	Raichur	West Bengal	South Twentyfour Parganas
Karnataka	Shimoga		
Karnataka	Tumkur		
Karnataka	Udupi		
Madhya Pradesh	Balaghat		
Madhya Pradesh	Dindori		
Madhya Pradesh	Mandla		
Madhya Pradesh	Aurangabad		
Madhya Pradesh	Bhandara		
Madhya Pradesh	Chandrapur		
Madhya Pradesh	Gadchiroli		
Madhya Pradesh	Gondiya		
Madhya Pradesh	Nanded		
Madhya Pradesh	Yavatmal		
Orissa	Gajapati		
Orissa	Ganjam		
Orissa	Kandhamal		
Orissa	Kendujhar		
Orissa	Koraput		
Orissa	Malkangiri		
Orissa	Mayurbhanj		

District-level data on population from the 2001 Census of India and Debroy and Bhandari (2004) provided us with further data on a number of welfare indicators in the districts:

1. The *poverty rate*: the proportion of households in a district who are below the poverty line.⁵
2. The *literacy rate*: the percentage of persons (who were seven years of age or above) in a district who were literate.⁶
3. The *immunisation rate*: the proportion of 0–6 year olds in a district who were immunised against disease.⁷
4. The *infant mortality rate*: deaths per 1,000 live births.⁸
5. The *pupil-teacher ratio*: the number of pupils per teacher in primary schools.⁹
6. The *pregnancy attention rate*: the proportion of women receiving skilled attention during pregnancy.
7. The *sex ratio*: among 0–6 year olds, the number of females per 1,000 males.¹⁰
8. The *safe drinking water rate*: the proportion of habitations in a district with safe drinking water.

⁵ The district level poverty rates are based on Bhandari and Dubey (2003). These data are from the Government of India's National Sample Survey (NSS), carried out under the auspices of the National Sample Survey Organisation (NSSO), an autonomous agency of the Ministry of Statistics, Government of India. These surveys provide representative estimates, at a national level and for the major Indian states, for a range of socio-economic indicators (Tendulkar 2007).

⁶ These data were from the 2001 Census. The

literacy rate was made "gender sensitive" by adjusting for differences in male and female literacy rates. The 2001 Census was also the source for the sex ratio and the female participation rate.

⁷ Complete immunisation involves vaccination of children, within the first year of life, against six diseases: diphtheria, pertussis, tetanus, tuberculosis, poliomyelitis, and measles. Source: *National Commission on Population's District-wise Indicators*, 2001, Government of India: New Delhi. This

was also the source for data on pregnancy attention rate, safe drinking water, and pucca roads.

⁸ The infant mortality rates are from the Registrar General of India.

⁹ Source: Selected Educational Statistics, 2000–01, <http://www.educationforallindia.com/selected-educational-statistics-2000-2001.pdf>.

¹⁰ 2001 Census for India.

9. The *pucca road* rate: the proportion of villages in a district connected by *pucca* (motorable) road.
10. The *female participation* rate, defined as the proportion of women in a district's workforce.

When “backwardness” was measured by a district's poverty rate, 85 of the 100 worst performing districts were contained in just seven states (Assam, Bihar, Chattisgarh, Jharkhand, Madhya Pradesh, Orissa, and West Bengal) and 45 districts were in just three states (Bihar, Jharkhand, and Orissa). In terms of (il)literacy, five states (Bihar, Jharkhand, Rajasthan, Orissa, and Uttar Pradesh) contributed 75 districts. In terms of immunisation rates, seven states (Arunachal Pradesh, Assam, Bihar, Jharkhand, Madhya Pradesh, Rajasthan, and Uttar Pradesh) contributed 85 districts. In terms of infant mortality rates, four states (Madhya Pradesh, Orissa, Rajasthan, and Uttar Pradesh) contributed 96 districts. In terms of the sex ratio of 0–6 year olds, five states (Gujarat, Haryana, Punjab, Rajasthan, and Uttar Pradesh) contributed 74 districts. Of the 100 districts with the lowest percentage of women receiving skilled assistance during pregnancy, 27 were in Uttar Pradesh and 25 were in Bihar. Lastly, of the 100 districts with the highest percentage of villages not connected to *pucca* roads, 30 were in Orissa and 22 were in Madhya Pradesh.¹¹

In addition to the above variables, some other variables were also relevant to the study of Naxalite behaviour. The first of these was the proportion of a district's area which was under *forest cover* because such cover provides a favourable environment for conducting armed insurrection. This information was provided by the Forest Survey of India (2003). The Forest Survey of India distinguishes between three types of forest cover: very dense, moderately dense, and open forest. In this study the three types were combined to provide an overall figure for forest cover.

¹¹ It should be noted that in peripheral areas, with difficult terrain, data may be less reliable than data for say urban areas.

¹² In response to the burden of social stigma and economic backwardness borne by persons belonging to some of India's castes, the Constitution of India allows for special provisions for members of these castes. Articles 341 and 342 include a list of castes and

tribes entitled to such provisions and all those groups included in this list—and subsequent modifications to this list—are referred to as “Scheduled Castes” (SC) and “Scheduled Tribes” (ST) respectively. Reservations for the SC were designed to assist groups who had known centuries of discrimination; reservations for ST were designed to assist groups who were traditionally isolated from the modern world and from mainstream society. Article 340

Since the government of India reported that, “the main support for the Naxalite movement comes from *Dalits* (Scheduled Castes) and *Adivasis* (Scheduled Tribes)” (2008, 3), the second set of variables related to the proportion of a district's population that belonged to the lower social classes: scheduled tribes (ST), scheduled castes (SC), and the other backward classes (OBC).¹² These data were computed from the 61st round of the National Sample Survey (pertaining to 2004–05).

The rationale for the choice of the variables set out above is the Government of India's belief—as exemplified by the title of a report it commissioned into the causes of extremism, *Development Challenges in Extremist Affected Areas* (Government of India 2008)—that issues of high poverty, low education, and limited employment opportunities were, in significant part, responsible for the growth of extremism in India. In this context, many of the variables used in this study were “developmental” variables reflecting the level of economic, social, and personal development of a district's population.

Crime statistics. The National Crime Records Bureau has, since 1953, provided crime statistics in India (relating to the number of reported crimes which fell under the purview of the Indian Penal Code) by state and district. We had available to us district level crime statistics for 1998. From these data, we defined three broad categories of crime:

1. *Violent crime*, comprising murders, attempted murders, rapes, kidnappings, *dacoities*, robberies, burglaries, thefts, riots, sexual harassment, dowry deaths, and cruelty by husband and relatives.
2. *Anti-women crime*, comprising rapes, kidnapping and abduction of women and girls, sexual harassment, dowry deaths, and cruelty by husband and relatives.

of the Indian Constitution empowers the government to create another deprived group designated as “other backward classes” (OBC) and in 1955, following the report of the Kalelkar Commission, 2,339 groups were designated as belonging to the OBC.

3. Public order crime, comprising riots and arson.

From the numbers of offences under each of the above categories we constructed the *violent crime rate* as the number of violent crimes in a district, per 10,000 of its adult population, and the *anti-women crime rate* as the number of crimes against women in a district, per 10,000 of its adult female population.

In terms of rates of violent crime, 23 and 22 districts of the 100 worst districts were in Madhya Pradesh and Rajasthan respectively, while, of the 100 worst districts in terms of rates of crime against women, 34 and 25 districts were in Madhya Pradesh and Rajasthan respectively. In terms of the *number* of crimes, 17 of the worst districts in terms of violent crime and crimes against women were in Maharashtra, with Andhra Pradesh and Rajasthan providing the next highest concentrations of violent crime districts. In terms of crimes against public order, 26 of the 100 districts with the largest number of such crimes were in Rajasthan, with Bihar, Kerala, and Tamil Nadu contributing, respectively, 13, 12, and 11 districts.

Table 2: Indicators of deprivation and rates of crime in Naxalite-affected versus Naxalite-free districts

	Naxalite-affected districts	Naxalite-free districts
Poverty rate (%)	32	24
Literacy rate	60.1	66.6
Infant mortality rate	72.3	73.4
Immunisation rate	51.8	52.8
Pregnancy assistance	43.0	50.5
Safe drinking water	68.1	73.5
<i>Pucca</i> roads	44.4	35.4
Number of violent crimes	1,655	1,592
Number of crimes against women	217	198
Number of crimes against public order	222	169

Poverty rate: Percentage of population below the poverty line.

Literacy rate: Percentage of adult population which is literate.

Infant mortality rate: Deaths before the age of one per 1,000 live births.

Immunisation rate: Percentage of children fully immunised, 0–6 years of age.

Pregnancy assistance: Percentage of women receiving skilled assistance during pregnancy.

Safe drinking water: Percentage of habitations covered by safe drinking water.

Pucca roads: Percentage of villages not connected by *pucca* road.

Number of violent crimes: Number of murders, attempted murders, rapes, kidnappings, *dacoities*, robberies, burglaries, thefts, riots, sexual harassments, dowry deaths, and cruelty by husband and relatives, in the district in 1998.

Number of crimes against women: Number of rapes, kidnappings and abductions of women and young girls, molestations, sexual harassments, dowry deaths, and cruelty by husband and relatives, in the district in 1998.

Number of crimes against public order: Number of riots and cases of arson.

Table 2 compares, with respect to each of the deprivation indicators and crime indicators listed above, districts in which there was, and was not, Naxalite activity. It shows that the average poverty rate in Naxalite-affected districts was considerably higher than that in districts which did not have Naxalite activity (32 versus 24 percent) and the literacy rate in Naxalite-affected districts was considerably lower than that in districts which did not have Naxalite activity (60 versus 67 percent). Furthermore, the average numbers of violent crimes, crimes against women, and public order crimes were all higher in Naxalite-affected districts than in Naxalite-free districts.

3. Estimation Results for the Crime Equations

Naxalite activity is not the only form of armed insurrection in India. However, political violence in Jammu and Kashmir and in the north-eastern states of India—the two areas most affected by *non-Naxalite* insurrection—is driven by separatist motives rather than by reasons of socio-economic oppression. In order not to confuse the two differently motivated insurrection types—Naxalite and non-Naxalite—the states of Jammu and Kashmir and all the north-eastern states were excluded from the estimation sample both for the crime equations (this section) and for the Naxalite activity equations (next section).¹³ Both sets of equations—crime and Naxalite activity—were estimated over all the districts in India and also over all the districts in the Naxalite-affected Indian states.¹⁴

The preceding section raises the question of whether the level of violent crime in a district can be explained by its characteristics, where these characteristics include the presence or absence of Naxalite activity in the district.¹⁵ In order to examine this hypothesis we estimated, using district-level data for the whole of India, three econometric equations whose dependent variables were, respectively, the number in every district of: (1) violent crimes, (2) crimes against women, (3) crimes against public order. The equations were estimated, over all the Indian districts, as a system of Seemingly Unrelated Regression Equations (SURE) in order to allow for correlation between the error terms of the three equations.

¹³ Excluded north-eastern states are: Arunachal Pradesh, Assam, Meghalaya, Mizoram, Manipur, Nagaland, and Tripura.

¹⁴ Andhra Pradesh, Bihar, Chhattisgarh, Jharkhand, Karnataka, Madhya Pradesh, Maharashtra, Orissa, Tamil Nadu, Uttar Pradesh, and West Bengal.

¹⁵ Of course, there is the possibility that, rather than violent crime being engendered by Naxalite activity, Naxalities operate in districts where there is already a high level of violence.

Table 3: Regression estimates of the crime equations

	District number of crimes for all states			District number of crimes for Naxalite-affected states		
	Violent crimes	Crimes against women	Crimes against public order	Violent crimes	Crimes against women	Crimes against public order
Naxalite activity	-236.917 (1.43)	-41.421** (2.19)		-57.814 (0.31)	-26.562 (1.35)	
District poverty rate			-3.051*** (4.00)			-0.465 (0.76)
Proportion of the district's population which is rural	-42.310*** (9.71)	-1.348*** (2.72)		-55.342*** (9.72)	-1.343** (2.17)	
District literacy rate	34.225*** (3.57)	13.681*** (3.81)	7.377*** (4.38)	6.499 (0.54)	11.706** (2.38)	-1.585 (1.28)
District literacy rate squared		-0.070** (2.35)			-0.076* (1.74)	
District ratio of female to male literates	-33.324*** (3.32)	-3.890*** (3.33)	-9.663*** (5.42)	-4.605 (0.33)	-0.298 (0.20)	1.887 (1.28)
District coverage of safe drinking water	-4.404* (1.67)	-0.494 (1.64)	-1.869*** (4.03)	-2.690 (0.80)	-0.079 (0.22)	-0.316 (0.90)
District male population	10.341*** (3.77)	2.686*** (8.59)	2.229*** (11.45)	6.087* (1.75)	2.487*** (6.55)	1.674*** (11.47)
District male population squared	0.031*** (3.91)	-0.002** (1.99)		0.033*** (3.63)	-0.002* (1.77)	
Proportion of district under forest cover	0.923 (0.22)	-0.219 (0.46)	-0.505 (0.71)	-2.790 (0.48)	-0.174 (0.28)	-0.079 (0.14)
Proportion of district population belonging to the Scheduled Tribes	13.051*** (2.65)	2.318*** (4.16)	2.977*** (3.20)	7.897 (1.13)	1.687** (2.25)	0.157 (0.20)
Proportion of district population belonging to the Scheduled Castes	-2.542 (0.37)	-0.363 (0.46)	2.086* (1.69)	-1.338 (0.15)	-0.825 (0.87)	2.470*** (2.64)
Proportion of district population belonging to the Other Backward Classes	8.737** (2.51)	0.235 (0.60)	1.629*** (2.63)	3.897 (0.80)	-0.533 (1.03)	0.697 (1.35)
Constant	3,783.779*** (4.47)	-176.841 (1.24)	274.215** (2.50)	5,092.557*** (4.71)	-243.786 (1.42)	-48.865 (0.59)
R2	0.615	0.487	0.293	0.637	0.510	0.402
LR test:	$\chi^2(11)=747$	$\chi^2(12)=451$	$\chi^2(9)=190$	$\chi^2(11)=586$	$\chi^2(12)=352$	$\chi^2(9)=225$
Observations	463	463	463	334	334	334

Notes:

Seemingly Unrelated Regression Equations (SURE) estimates. Numbers in parentheses are z-scores.

*** significant at 1 percent level; ** significant at 5 percent level; * significant at 10 percent level;

The chi-squared statistics report the result of testing the null hypotheses that all the slope coefficients are zero against the alternative hypothesis that some are non-zero.

Andhra Pradesh, Bihar, Chhattisgarh, Jharkhand, Karnataka, Madhya Pradesh, Maharashtra, Orissa, Tamil Nadu, and West Bengal.

The estimation results from the three crime equations are shown in Table 3. Some variables whose associated coefficients had z scores which were less than 1 were omitted from the equation specification: as is well known, the omission of such variables enhances the explanatory power of the equation.¹⁶ The equations for violent crime, crimes against women, and crimes against public order explain, respectively, 62, 49, and 29 percent of the inter-district variation (over all the Indian districts) in the numbers of such crimes for India in its entirety, and 64, 51, and 40 percent of inter-district variation for the Naxalite-affected states.

The first point to make about the estimation results is that, after controlling for other factors, districts with Naxalite presence (listed in Table 1) had *ceteris paribus* lower numbers for violent crime and crimes against women compared to districts in which there was no Naxalite activity. As is well known, the Naxalite movement in India pays special regard to the economic and social position of disadvantaged groups (Dalits, Adivasis, and women) from whom it gets most of its support. However, it should be stressed that the coefficients associated with the Naxalite variable were not significantly different from zero. It is difficult to say why, *after controlling for other factors*, normal criminal activity is lower in Naxalite districts; judging from the experience of say, Northern Ireland, it is plausible that Naxalites—like the Loyalist and Republican paramilitary forces in Northern Ireland—also enforce law and order in their areas of influence (Knox 2001).

The second point is that districts in India (whether Naxalite or non-Naxalite), with a larger proportion of their population living in rural areas had lower levels of violent crime and of crimes against women compared to more urbanised districts: a percentage point increase in the proportion of a district's rural population would lead, on average, the number of violent crimes in a district to fall by 42 and crimes against women to fall by one for India in its entirety,

and by 55 and one for the Naxalite-affected states (figures per 10,000 population).

The third point is that the poverty rate (i.e. the proportion of households in the district who were poor), whether or not the district was Naxalite-affected, had no bearing on the number of violent crimes, or on the number of crimes against women. However, the level of poverty did have a significant effect on the number of crimes against public order (riots and arson): the *smaller* the proportion of households in the district who were poor, the *larger* the number of crimes against public order.¹⁷

The fourth point is that, for India in its entirety, higher levels of literacy were associated with a higher number of crimes, of all three types, in a district. A percentage point increase in the literacy rate was associated with an additional 34 violent crimes, 14 crimes against women, and 7 crimes against public order (figures per 10,000 population). However, in Naxalite-affected states, literacy rates did not exercise a significant effect on the number of violent crimes, or on the number of crimes against public order, in a district but they did exert a significant upward influence on the number of crimes against women in a district. However, partially offsetting this “bad” literacy effect, a rise in the ratio of female to male literacy rates served to reduce the number of all three types of crime, with the largest impact being on violent crime and the smallest on crimes against women.

The fifth point is that the absence of safe drinking water in a district, whether Naxalite or non-Naxalite, was associated with higher numbers of all three types of crime, with the effect being highest for violent crimes: a percentage point increase in the number of habitations receiving safe drinking water would lead to the number of violent crimes in a district falling by four per 10,000 population. The association between safe drinking water and violence is not surprising:

¹⁶ One exception was the variable “forest cover.” This variable is important in explaining Naxalite activity because it presumably offers a suitable physical environment for armed activity. Since

it might also be favourable for criminal activity, it was retained on grounds of consistency.

¹⁷ A percentage fall in the poverty rate would lead to the number of crimes against public order to increase by three.

in villages and in the poorer urban areas of India, waiting to obtain water from a shared source (for example river, pond, tap) is a feature of daily life and provides a flash-point for arguments and quarrels and, in particular for inter-caste disputes as upper caste persons attempt to prevent lower caste persons from drawing water.

The sixth point is that the number of crimes in a district (whether Naxalite or non-Naxalite), was positively related to the number of adult males in a district. If adult males are viewed as the main perpetrators of crime, then an increase of 10,000 in their number was associated with an additional ten violent crimes; three crimes against women; and two crimes against public order (figures per 10,000 population).¹⁸

Lastly, the presence of persons from the Scheduled Tribes in a district was associated with a higher average number of crimes in a district, in particular for violent crimes: for India in its entirety, a percentage point increase in the proportion of persons from the Scheduled Tribes would lead the average number of violent crimes in a district to go up by thirteen per 10,000 population. Given the level of violence

against persons from the Scheduled Tribes it is, perhaps, not surprising that Naxalite activity is focused in such areas.

4. Estimation Results for the Naxalite Activity Equation

Using the district-level data, described above, we estimated a logit model in which the dependent variable (*naxal*) took the value 1 if a district had Naxalite activity (see Table 1) and the value 0 if it did not. This variable was defined for *all the districts* in the Indian states analysed here. Table 4 shows the results of estimating such a model, firstly on data for *all the districts* in India (but, as discussed earlier, excluding Jammu and Kashmir and the north-eastern states) and, then, on data *restricted to the ten Indian states*—Andhra Pradesh, Bihar, Chhattisgarh, Jharkhand, Karnataka, Madhya Pradesh, Maharashtra, Orissa, Tamil Nadu, and West Bengal—containing districts affected by Naxalite activity. The columns of Tables 4 show the estimated odds ratios: a coefficient estimate greater than 1 implies that the probability of a district having Naxalite activity ($\Pr(naxal=1)$) rises with an increase in the value of that variable while an estimate less than 1 implies that the probability falls.¹⁹

¹⁸ The square of the adult male population was included to make the population effect non-linear.

¹⁹ The logit equation is $\frac{\Pr(naxal_j = 1)}{1 - \Pr(naxal_j = 1)} = \exp\left\{\sum_{k=1}^K X_{jk} \beta_k\right\} = \exp\{z_j\}$ for M coefficients, $\beta_j, j=1 \dots M$

and for values, X_{jk} on $k=1 \dots K$ variables. The columns of Table 9 report report

$\frac{\partial}{\partial X_{jk}} \left(\frac{\Pr(naxal_j = 1)}{1 - \Pr(naxal_j = 1)} \right) = \beta_k \exp(\sum X_{jk} \beta_k)$, which is the the change in the odds ratio, given a change

in the value of the k^{th} variable, where $\Pr(naxal_j = 1) = e^z / (1 + e^z)$

Table 4: Logit estimates of Naxalite activity

	All states	States affected by Naxalite activity*
Proportion of the district's population which is rural	1.024* (1.65)	1.038** (2.38)
District poverty rate	1.031*** (2.89)	1.013 (1.16)
District literacy rate	0.937*** (4.06)	0.952*** (2.91)
District female work participation	1.080*** (4.20)	1.069*** (3.46)
District coverage of safe drinking water	0.989* (1.82)	0.989* (1.66)
District male population	1.033*** (4.38)	1.030*** (3.82)
District male population squared	1.000* (1.80)	1.000* (1.68)
Proportion of district under forest cover	1.063*** (5.60)	1.061*** (4.98)
Proportion of district population belonging to the Scheduled Tribes	1.020 (1.62)	1.020 (1.37)
Proportion of district population belonging to the Scheduled Castes	1.014 (0.73)	1.005 (0.28)
Proportion of district population belonging to the Other Backward Classes	1.023** (2.31)	1.015 (1.42)
Pseudo-R2	0.32	0.28
LR test: $\chi^2(11)$	147	107
Observations	472	343

Notes:

Numbers in parentheses are z-scores

*** significant at 1 percent level; ** significant at 5 percent level; * significant at 10 percent level

* Andhra Pradesh, Bihar, Chhattisgarh, Jharkhand, Karnataka, Madhya Pradesh, Maharashtra, Orissa, Tamil Nadu, and West Bengal.

Table 4 shows that whether the equation was estimated over all the Indian states, or whether the estimation was confined to the Naxalite-affected states, the probability of there being Naxalite activity in a district increased with a rise in its poverty rate and decreased with a rise in its literacy rate. Focusing on the results as they pertain to all the Indian districts, the column headed "All States" in Table 4 shows that,

in addition to poverty and literacy rates, five further factors affected the likelihood of Naxalite activity in districts:

- (i) More populous districts, as measured by the number of adult males in a district, were more likely to have Naxalite activity than less sparsely populated states.
- (ii) The greater the female participation in the workforce of a district, the more likely it was to have Naxalite activity.²⁰

- (iii) Districts with a smaller coverage of safe drinking water were more likely to have Naxalite activity compared to districts where it was more usual for habitations to have safe drinking water.
- (iv) Districts with a larger coverage of forests were more likely to have Naxalite activity compared to districts with smaller forest cover.
- (v) Districts with a larger proportion of persons belonging to the Scheduled Tribes and to the Other Backward Classes were more likely to have Naxalite activity than districts containing a smaller proportion of persons from these groups but, for reasons discussed below, the relation between Scheduled Tribes and the probability of Naxalite activity was not significantly different from zero.

Results (iv) and (v) require some amplification. Persons belonging to the Scheduled Tribes in India tend to live in areas which have relatively high forest cover. In consequence, there would be a high degree of collinearity between the extent of a district's forest cover and the proportion of its population that are from the Scheduled Tribes. After controlling for forest cover, there was still a weak, non-significant, relationship between the probability of Naxalite activity in a district and the share of Scheduled Tribe members in the district's population. Second, as is well known, as the upper castes have abandoned farming as their traditional occupations to move into professional jobs, they have been replaced as small cultivators by persons from the Other Backward Classes: it is friction between the Other Backward Classes and the lower classes (Scheduled Tribes and Castes) that now largely provides the basis of inter-caste violence in India.

For some of these variables, one cannot discount the possibility of reverse causality. For example, poverty may lead to Naxalite activity but, conversely, Naxalite activity in a district, by discouraging business and agricultural investment, may contribute to a district's poverty. We were unable to disentangle the extent to which poverty leads to Naxalite activity and Naxalite activity leads to poverty.

The explanatory power of the logit equations is shown in terms of the "Pseudo-R²." The "Pseudo-R²" is a popular measure of the model's performance in binary models and compares the maximised log-likelihood value of the full model ($\log L$) to that obtained when all the coefficients except the intercept term are set to zero ($\log L_0$) and is defined as: $1 - (\log L / \log L_0)$. The measure has an intuitive appeal in that it is bounded by 0 (all the slope coefficients are zero) and 1 (perfect fit). By the standards of discrete choice models, the R² values reported in Table 4—0.32 and 0.28 respectively—are high.

5. Assessing the Model's Predictive Power

One way of assessing the predictive ability of a model with a binary dependent variable is by constructing a 2x2 table of the "hits" and "misses" emanating from a prediction rule such that a district is regarded as being Naxalite-affected ($naxal=1$) or Naxalite-free ($naxal=0$) if, for a cut-off probability p^* , the *estimated* probability $\Pr(naxal=1) > p^*$. Given a cut-off point p^* , the sensitivity and the specificity of an equation are, respectively, the proportions of positive and negative cases that are correctly classified.

²⁰ In this connection it is important to note that both Maoist parties in India are explicitly concerned with issues relating to women at work (fair wages and freedom from harassment) and in the home (domestic violence and the role of marriage in women's

oppression). Consequently, there has been a significant increase in the number of women coming into the movement in Andhra Pradesh (Kannabiran et al. 2004). Bhatia (2005) observes that an important aspect of the Naxalite movement in central India has

been to fight for the dignity of India's lower castes: as a direct consequence of Naxalite action the incidence of rape of lower caste women has fallen, lower caste children are able to attend school, and arbitrary beatings of lower caste persons are no longer tolerated.

Table 5: Predictions from the logit model of Table 9 (estimated over all districts in India)

Classified	True		Total
	D	~D	
+	35	13	48
-	53	371	424
Total	88	384	472

Classified + if predicted Pr(D) >= .5
 True: naxal=1; False: naxal=0
 Correctly classified: 86.02%

Sensitivity Pr(+ D)	39.77%
Specificity Pr(- ~D)	96.61%
Positive predictive value Pr(D +)	72.92%
Negative predictive value Pr(~D -)	87.5%

Table 6: Predictions from the logit model of Table 9 (estimated over all districts in Naxalite-affected States in India)

Classified	True		Total
	D	~D	
+	40	17	57
-	48	238	286
Total	88	255	343

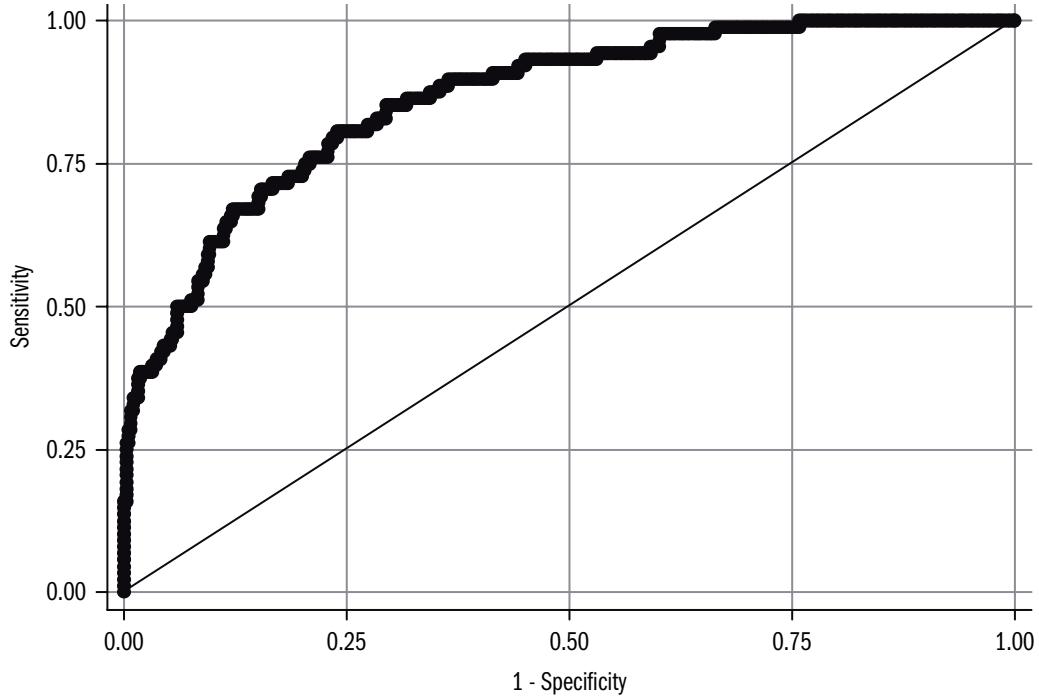
Classified + if predicted Pr(D) >= .5
 True: naxal=1; False: naxal=0
 Correctly classified: 81.05%

Sensitivity Pr(+ D)	45.45%
Specificity Pr(- ~D)	93.33%
Positive predictive value Pr(D +)	70.18%
Negative predictive value Pr(~D -)	83.22%

Table 5 shows that with $p^*=0.5$, 86 percent of the districts were correctly classified when the equation was estimated over all the districts and Table 6 shows that 81 percent of the districts were correctly classified when the equation was estimated over all the districts in the Naxalite-affected states. The model correctly identified districts with Naxalite activity in 40 percent of the cases (35 out of 88 districts, Table 5: Pr(+|D)) when it was estimated over all the districts in India and in 46 percent of the cases (40 out of 88 districts, Table 6: Pr(+|D)) when it was estimated over all the districts in the ten Naxalite-affected states.

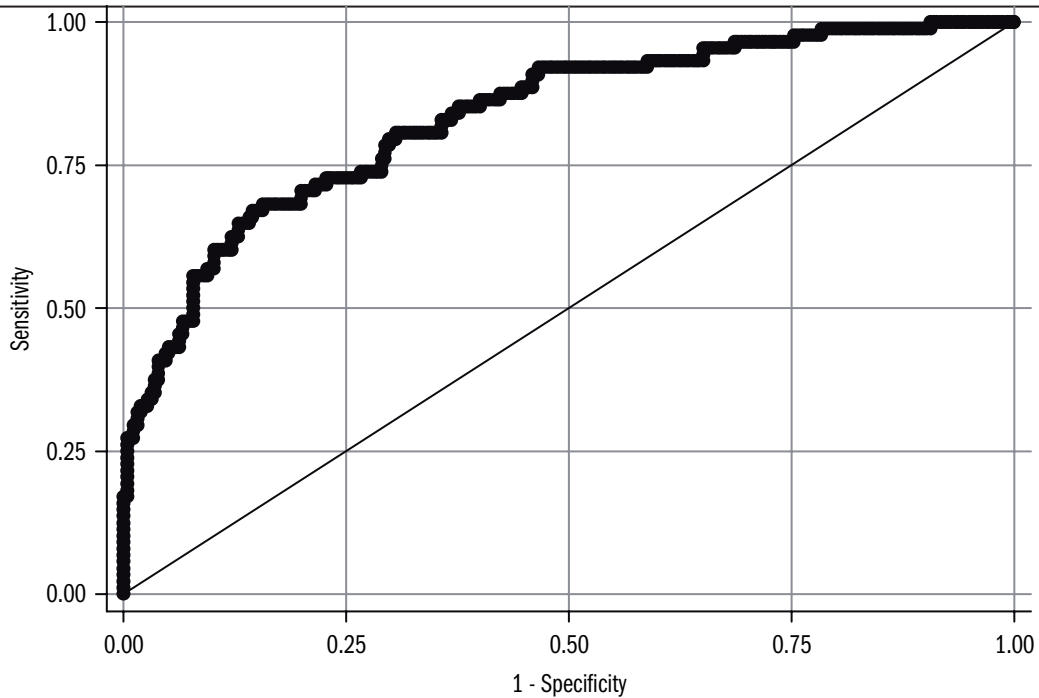
From a different perspective, the likelihood of a district that was identified by the model as being Naxalite-affected actually being Naxalite-affected was 73 percent when the model was estimated over all the districts in India (35 out of 48 districts, Table 5: Pr(D|+)) and 70 percent when it was estimated over all the districts in the ten affected states (40 out of 57 districts, Table 6: Pr(D|+)). However, the likelihood of a district identified by the model as not being Naxalite-affected actually not being Naxalite-affected was 88 percent when the model was estimated over all the districts in India (371 out of 424 districts, Table 5: Pr(~D|-)) and 83 percent when it was estimated over all the districts in the ten affected states (238 out of 286 districts, Table 6: Pr(~D|-)).

Figure 1: Sensitivity versus 1-specificity when the cutoff point is varied (all districts in India)



Area under ROC curve = 0.8632

Figure 2: Sensitivity versus 1-specificity when the cutoff point is varied (all districts in Naxalite-affected states of India)



Area under ROC curve = 0.8338

One can also plot the graph of sensitivity versus (1-specificity) as the cut-off point p^* is varied. The curve starts at (0,0) corresponding to $p^*=1$: no positive case is correctly classified (sensitivity=0) and every case is classified negative (specificity =1 or 1-specificity=0); it ends at (1,1) corresponding to $p^*=0$: every positive case is correctly classified (sensitivity=1) and no case is classified as negative (specificity =0 or 1-specificity=1). A model with no predictive power would be the 45° line connecting the two extreme points (0,0) and (1,1). The more bowed the curve, the greater the predictive power. Hence the area under the ROC curve (the receiver operating characteristic curve)—is a measure of the model's predictive power: a model with no predictive power has an area of 0.5, while perfect predictive power implies an area of 1 (StataCorp 2001). Figures 1 and 2 show the ROC curves for, respectively, all districts in India and all districts in Naxalite-affected states: both curves are considerably bowed, with 86 percent of the area under the curve in Figure 1 and 83 percent in Figure 2, suggesting that the model has considerable predictive power.

6. Structural Effects

A feature of Naxalite activity in India is that it affects districts belonging to “poor” states (Bihar, Chhattisgarh, Jharkhand, Madhya Pradesh, Orissa, and Uttar Pradesh: 48 out of 216 districts) as well as districts belonging to “rich” states (Andhra Pradesh, Karnataka, Maharashtra, Tamil Nadu, and West Bengal: 40 out of 133 districts). Rich states differ from poor states in two respects.

1. In respect of variables not included in the econometric equations (the residual term), they may have different levels of infrastructure in terms of roads, schools, security forces, etc. We refer to such differences as structural differences
2. In terms of the variables included in the equation, they may have different values for the included variables: for example, poverty rates may be lower and literacy rates may be higher in rich (Naxalite-affected) states compared to poor (Naxalite-affected) states. We refer to such differences as attribute differences.

Even if two districts had the same values of the included variables (poverty rates, literacy rates, forest cover), the fact that one was in a rich state and the other was in a poor state might mean that they would have different likelihoods of Naxalite activity. The reason for this is that the districts differ in terms of structure and, in econometric terms, this would manifest itself in coefficient differences between rich and poor states. Poverty rates, for example, might have different coefficients for rich-state districts compared to poor-state districts because these rates would be embedded in different structures.

In order to test for structural effects on the likelihood of Naxalite activity, we defined a dummy variable, D , which took the value 1 if a district belonged to a rich (Naxalite-affected) state and 0 if it belonged to a poor (Naxalite-affected) state. All the explanatory variables were multiplied by this dummy variable and the resulting interaction variables were included in the equation as *additional* variables. If the coefficient on a interaction variable (say the rich-state literacy rate interaction) was significantly different from zero, then this would mean that the same value of the literacy rate would affect the probability of Naxalite activity differently, depending upon whether it pertained to a poor state district or a rich state district.

Table 7: Logit estimates of Naxalite activity in districts of Naxalite-affected states with interaction terms

	Odds ratio	z
Proportion of district population which is rural	0.991	-0.39
Rich state x rural interaction	1.087	3.27
District poverty rate	1.037	2.11
Rich state x poverty rate interaction	0.956	-1.72
District literacy rate	0.949	-2.34
Rich state x poverty rate interaction	0.954	-1.36
District female work participation	1.026	0.83
Rich state x female work participation interaction	1.050	0.94
District coverage of safe drinking water	0.992	-0.93
Rich state x coverage of safe drinking water interaction	0.977	-1.28
District male population	1.033	1.72
Rich state x male population interaction	0.990	-0.45
District male population squared	0.999	-0.62
Rich state x male population interaction squared interaction	1.000	0.51
Proportion of district under forest cover	1.076	3.82
Rich state x forest cover interaction	0.968	-1.23
Proportion of district population belonging to the Scheduled Tribes	1.038	1.5
Rich state x Scheduled Tribes interaction	0.977	-0.59
Proportion of district population belonging to the Scheduled Castes	1.005	0.16
Rich state x Scheduled Castes interaction	1.038	0.88
Proportion of district population belonging to the Other Backward Classes	1.040	1.7
Rich state x Other Backward Classes interaction	0.984	-0.59

Rich states: Andhra Pradesh, Karnataka, Maharashtra, Tamil Nadu, and West Bengal.

Poor states: Bihar, Chhattisgarh, Jharkhand, Madhya Pradesh, Orissa, and Uttar Pradesh.

Table 7 shows the results of estimating the Naxalite activity equation (Table 4) with interaction terms. This shows that the coefficients associated with two variables—the proportion of a district's population that was rural and the district poverty rate—differed significantly between rich and poor states: a given rate of poverty in a district was more likely to result in Naxalite activity if the district belonged to a rich than to a poor state. For all other variables there were no significant coefficient differences between districts in rich and poor states.

7. Conclusions

This paper posed two questions: (1) is it a fact that there is more violence in Naxalite-affected districts compared to

districts which are free of Naxalite activity? (2) can the fact that Naxalite activity exists in some districts of India, but not in others, be explained by differences in their economic and social conditions?

The rapid spread of Naxalite activity in India, and the Maoist movement in Nepal, has made finding answers to these questions a matter of urgency. The raw data showed that there was more violent crime, crimes against women, and crimes against public order in Naxalite-affected districts. However, our econometric results showed that, after controlling for other variables, Naxalite activity in a district had, if anything, a dampening effect on its level of violent crime and crimes against women.

The raw data also showed that Naxalite-affected districts had higher poverty rates and low literacy rates than districts which were Naxalite-free. This time however, our econometric results showed that, even after controlling for other variables, the probability of a district being Naxalite-affected rose with an increase in its poverty rate and fell with a rise in its literacy rate. So, one prong in an anti-Naxalite strategy would be to address the twin issues of poverty and illiteracy in India.

In this context, however, there are two features of the Indian polity that are worrying. First, The Administrative Reforms Commission in its report “Combating Terrorism” has called for Naxalites to be dubbed “terrorists,” on a par with Islamic jihadis, rather than, as hitherto, “left-wing extremists” who resort to violence in pursuit of an ideology.²¹ Second, the village defence force, Salwa Judum, created by the Chattisgarh government to combat Naxalite activity in the state, may have to be scrapped after the National Human Rights Commission accused it of grave human rights abuses.²² Both features—labelling Naxalites as “terrorists” and human rights violations in combating them—fly in the face of the conclusions arrived at in this paper.

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²⁰ *Times of India*, September 18, 2008.

²² *Times of India*, September 20, 2008.