ROUTINE ACTIVITIES AND INDIVIDUAL DEVIANT BEHAVIOR[*]

D. Wayne Osgood
The Pennsylvania State University

Janet K. Wilson
University of Central Arkansas

Patrick M. O'Malley
University of Michigan

Jerald G. Bachman
University of Michigan

Lloyd D. Johnston
University of Michigan

We extend the routine activity perspective's situational analysis of crime to individual offending and to a broad range of deviant behaviors. In this view, unstructured socializing with peers in the absence of authority figures presents opportunities for deviance: In the presence of peers, deviant acts will be easier and more rewarding; the absence of authority figures reduces the potential for social control responses to deviance; and the lack of structure leaves time available for deviant behavior. To determine whether individuals who spend more time in unstructured socializing activities engage in deviant behaviors more frequently, we analyzed within-individual changes in routine activities and deviance across five waves of data for a national sample of more than 1,700 18- to 26-year-olds. Participation in these routine activities was strongly associated with criminal behavior, heavy alcohol use, use of marijuana and other illicit drugs, and dangerous driving. Furthermore, routine activities accounted for a substantial portion of the association between these deviant behaviors and age, sex, and socioeconomic status.

T he emergence of theories of crime that emphasize the influence of routine activities (Cohen and Felson 1979) or lifestyle (Hindelang, Gottfredson, and Garofalo 1978) is one of the most significant developments in the study of deviance over the past two decades.[1] This situational approach shifts attention away from the personal histories of offenders toward the dependence of crime on opportunities presented by the routine activities of everyday life. Birkbeck and LaFree (1993) note that this shift corresponds to Sutherland's (1947) distinction between historical explanations, which account for crime by past events, and situational explanations, which account for crime by the circumstances in which it occurs. Routine activity theorists have applied this situational approach to explain group differences in victimization (Hindelang et al. 1978) and trends in aggregate crime rates (Cohen and Felson 1979) in terms of the social structure's impact on routine activities.

According to Meier and Miethe (1993: 472–73), sociologists find the routine activity perspective appealing because it identifies

[1] Several authors agree that the lifestyle theory of Hindelang et al. (1978) and the routine activity theory of Cohen and Felson (1979) do not differ in substance (Birkbeck and LaFree 1993; Garofalo 1987; Meier and Miethe 1993). We treat these two theoretical positions, and other positions that are closely related to them (Miethe and Meier 1990, 1994), as versions of a single theoretical perspective.

a symbiotic relationship between conventional activities and illegal activities and points to fundamental ironies in links between some otherwise constructive social changes and increasing crime (e.g., women's employment and daytime burglary). The routine activity perspective challenges the commonplace notion that crime must stem from other "bad" things, an idea that Felson (1994) has labeled the "pestilence fallacy."

We extend the routine activity perspective in several ways. First, rather than focusing on victimization or aggregate crime rates, which studies from this perspective typically do, we emphasize offending by individuals. This is unusual, as the routine activity perspective is often cited as redirecting the study of crime and deviance away from an exclusive concern with the offender. Indeed, the approach is often categorized as a theory of victimization because most routine activity studies rely on victimization data (Birkbeck and LaFree 1993). Yet the theory's basic prediction, that crime depends on routine activities, pertains to individual offending as well. Indeed, a convergence of the study of offending and the study of victimization is implied by evidence that rates of victimization are especially high among offenders (Jensen and Brownfield 1986; Lauritsen, Laub, and Sampson 1992).

Thus far, relatively little attention has been given to the implications of the routine activity perspective for individual offending. Felson has often discussed such themes (1986, 1994; Felson and Gottfredson 1984), but Riley (1987) offers the only empirical study of individual deviance based on this perspective. Some theories that pertain to individual offending include the situational emphasis of the routine activity perspective, such as Gottfredson and Hirschi's (1990) general theory of crime and Miethe and Meier's (1990, 1994) structural-choice theory of victimization. In these theories, however, historical factors (in Sutherland's sense of the term) are prominent in explaining individuals' rates of deviant behavior.

We also extend the routine activity perspective to a wider range of deviant behaviors—behaviors that are disapproved by conventional normative standards and that typically provoke attempts at social control if detected by authority figures. Theoretical statements defining the perspective are explicitly limited to predatory crime, meaning incidents in which an offender does harm to or takes property from a victim (Cohen and Felson 1979; Hindelang et al. 1978; Miethe and Meier 1994). This sharp distinction between offender and victim is not applicable to a large share of illegal or deviant behavior, such as the use of illicit drugs, reckless behavior, illegal services, and mutual violence erupting from disputes. Even so, the relevance of routine activities to a wide range of deviant behaviors is illustrated in Felson's writings (Felson 1986, 1994; Felson and Gottfredson 1984).

Building on his work and on several concepts from delinquency theory, we develop the rudiments of a routine activity theory of general deviance. We investigate these themes empirically through a study of the relationships between several types of deviant behaviors and a variety of routine activities. In accord with the routine activity perspectives' emphasis on connecting social structure to crime, we also assess the degree to which routine activities can account for the relationship of deviance to some important dimensions of social differentiation.

PRIOR RESEARCH ON DEVIANCE AND ACTIVITIES

Several researchers have investigated the relationship between deviant behavior and the way that people spend their time, although only Riley (1987) has applied the routine activity perspective to the question. One potential connection between routine activities and deviant behavior is captured by the old saying "Idle hands are the devil's workshop." This idea appears in Hirschi's (1969) social control theory as the bond of involvement: "The assumption, widely shared, is that a person may be simply too busy doing conventional things to find time to engage in deviant behavior" (p. 22). Thus, it follows that the amount of time spent in virtually any nondeviant activity should be negatively associated with rates of deviant behavior.

There are findings consistent with this prediction, such as Hundleby's (1987) results concerning home-centered activities, and Agnew and Peterson's (1989) findings on passive leisure and organized activities. Yet

these relationships are weak, and they are complemented by findings of weak positive relationships between other conventional activities and deviant behavior. Hirschi (1969: 190) found that adolescents who more frequently watch television, read comics, and play games exhibit higher levels of delinquency, and Hundleby (1987) found that outdoor activities (e.g., boating and camping) and athletic activities are positively associated with substance use, sexual behavior, and delinquency. There is broad support for Hirschi's (1969:190) conclusion that delinquent behavior simply is not sufficiently time consuming to support the logic underlying the bond of involvement. These weak findings are not surprising when viewed from the routine activity perspective, which focuses on activities that provide opportunities for deviant behavior.

In a different vein, it has been argued that certain activities are related to deviant behavior because they are part of a deviant subculture (Agnew and Peterson 1989) or a deviant lifestyle (Jensen and Brownfield 1986). If hanging out in pool halls is popular among delinquents, then people who do so "will be exposed to individuals who encourage or provide opportunities for delinquency, and/or foster values that approve of or are at least conducive to delinquency" (Agnew and Peterson 1989:334). Agnew and Peterson (1989:336) cite several studies establishing that spending time in such activities is positively associated with adolescent deviance.

Though such findings may be of descriptive value, their relevance to theoretical explanation is limited by the theoretical indeterminacy discussed by Meier and Miethe (1993:484–87). The preceding quote from Agnew and Peterson suggests a connection with the routine activity perspective because activities characteristic of a delinquent subculture can provide opportunities for deviant behavior. At the same time, however, these activities are equally germane to theories that portray deviant behavior as arising through a process of social influence, such as differential association theory (Sutherland 1947). The causal indeterminacy is compounded by the possibility of selection—one can choose activities that carry a reputation for deviance, and selecting such activities may simply re-

flect that one is already inclined toward deviant behavior, while choosing conventional activities may indicate the opposite. For instance, Hirschi (1969:191) concluded that time spent on homework was negatively related to delinquency because it indicated investment in conventional goals. In addition to these theoretical pitfalls, focusing on activities that carry connotations of deviance or virtue is contrary to the broader aims and spirit of the routine activity perspective, which explicitly eschews explanation in terms of values and normative standards (Birkbeck and LaFree 1993; Felson 1994; Meier and Miethe 1993).

Research on the relationship between routine activities and individual deviance reveals a set of activities consistent with the routine activity perspective that is not as subject to alternative theoretical interpretations. Several studies suggest that individual offending is positively associated with time spent in unstructured socializing with peers in the absence of authority figures. Rates of delinquency are higher among adolescents who spend more time (1) talking with friends or riding in a car (Hirschi 1969:194–95), (2) in social activities, "hanging out," or with their peers (Agnew and Peterson 1989), and (3) away from home or with groups of friends (Riley 1987). Wallace and Bachman (1991) found that, among a large set of demographic and attitudinal measures, the frequency of spending evenings out for fun and recreation was the strongest predictor of substance use. The most comprehensive investigation of routine activities and deviance is by Hundleby (1987), who assessed the relationships of sexual behavior, several types of substance use, and delinquency to a wide variety of adolescent activities. Among these activities the only consistently strong correlate of deviance was an index of informal socializing with friends.

Time spent in informal, unsupervised socializing with peers carries no direct connotation of deviance. Virtually everyone spends some time this way, and people can as easily use this time for conventionally valued pursuits as for proscribed ones. Furthermore, this classification of activities is sufficiently general to be applicable across time and across social groups, providing the possibility for assessing whether social change or

cross-cultural differences in time spent this way translates to differences in rates of deviance. Indeed, there is cross-cultural evidence of this sort. From their analysis of the Human Relations Area Files for 50 cultures, Schlegel and Barry (1991:135–39) concluded that problems of adolescent antisocial behavior are more likely in cultures in which adolescents spend less time in the company of adults and more time in the company of peers. Interestingly, independent socializing with peers typically occurred through participation in culturally valued religious or military activities.

The essence of the routine activity perspective is that crime is dependent on opportunity. The literature contains passing remarks to the effect that opportunities for deviance might be especially prevalent during informal, unsupervised socializing with peers (Agnew and Peterson 1989:334; Hundleby 1987:108), but the subject has not been developed theoretically. We now turn our attention to that task.

APPLYING THE ROUTINE ACTIVITY PERSPECTIVE TO INDIVIDUAL DEVIANT BEHAVIOR

Situational Motivation

Although Cohen and Felson (1979) specify the "motivated offender" as one of three necessary elements of predatory crime, they give little attention to the nature of this motivation, noting that theories of crime and delinquency offer many possibilities. We believe that a routine activity analysis of individual deviance is best built upon a conception of motivation in which situational factors are prominent. Fortunately, such motivational concepts can be found in theories of deviance, despite their overwhelming emphasis on historical rather than situational explanations.

A central concept for our analysis is Briar and Piliavin's (1965) idea of situational motivation, which states that the motivation for delinquency is inherent in the situation rather than in the person.

> [R]ather than considering delinquent acts as solely the product of long term motives deriving from conflicts or frustrations whose genesis is far removed from the arenas in which

the illegal behavior occurs, we assume these acts are prompted by short-term situationally induced desires experienced by all boys. . . . (P. 36)

Their conception meshes well with Matza's (1964) claim that delinquency arises from "drift"—a state of openness to deviant values but not a rejection of conventional values. Similarly, Gold's (1970:92–99) analogy of delinquency to a "pickup game" of basketball or baseball emphasizes that deviance typically is casual and spontaneous. To participate, one needs "to be there when the opportunity arises and when others are willing" (p. 94). Yet the pickup game analogy is ambiguous about whether finding opportunities for deviance stems from prior motivation. One player comes to the court looking for a game, so her motivation is internal rather than situational. Another player joins the game only because a friend calls out as he passes by. This second image better matches the idea of situational motivation, in which the potential for deviance arises in the course of other pursuits.

Gottfredson and Hirschi (1990) include a situational conception of motivation in their general theory of crime (which they define to encompass a broad range of deviant behaviors). "[O]ur theory suggests that the motive to crime is inherent in or limited to immediate gains provided by the act itself" (p. 256). A situational conception of motivation also meshes well with the cost versus benefit analysis found in the rational-choice perspective, which shares the routine activity perspective's emphasis on the contribution of opportunity to crime.

For Briar and Piliavin (1965), the concept of situational motivation is the basis of a social control explanation of delinquency. Reasoning that everyone encounters situations in which delinquent behavior would be rewarding, they portray variation in delinquency as dependent on the "stakes in conformity" (Toby 1957) that induce an actor to forego those benefits. Similarly, Gottfredson and Hirschi's (1990) general theory of crime emphasizes self control, which is an individual's capacity to resist temptations.

We depart from these theorists to focus on another implication of the concept of situational motivation. If deviance arises from

conducive situations, then individuals who spend more time in these situations should have higher deviance rates. The routine activity perspective points to the ordinary activities of everyday life as a source of variation in levels of exposure to such situations.

We do not assume that everyone is equally receptive to the temptations of situations conducive to deviance, but neither do we assume that exposure to them is relevant only to a small group of "motivated offenders." "Subterranean values" supportive of deviance (excitement, conspicuous consumption, and toughness) are part of the general culture (Matza and Sykes 1961), so one need not reject conventional values in order to engage in deviance. Even youths with a history of delinquent behavior feel compelled to justify their acts (Sykes and Matza 1957), rate conventional behavior positively and deviant behavior negatively (Short and Strodtbeck 1965), and erroneously claim that their friends engage in less deviant behavior than most other people (Gold 1970:96–97). Therefore, we reject a categorical distinction between offenders and nonoffenders. Instead, we assume that people vary widely in their susceptibility to deviance, that this variation is continuous and not discrete (Rowe, Osgood, and Nicewander 1990), and that most people have the potential for at least occasionally succumbing to an opportunity for deviant behavior.

We replace Cohen and Felson's (1979) "motivated offender" with an assumption that the *motivation resides in the deviant behavior itself*. Their second element, the "suitable target," provides a situational motivation appropriate to the domain of their analysis, namely, direct contact predatory crime (p. 589). To apply the routine activity perspective to a broader range of deviant behavior, we substitute the more general notion of situations in which *a deviant act is possible and rewarding*. Following Briar and Piliavin's (1965:38) ideas about variation among situations and Gottfredson and Hirschi's (1990) portrayal of the inducements of crime, we state that the easier the deviant act and the greater the symbolic and tangible rewards, the greater the inducement to deviance.

The inducement to deviance of any specific situation in some respects depends on the deviant act in question. For instance, income tax fraud is not possible without earnings that are subject to taxation, and it is made considerably easier when a person has received earnings that were not reported to the government. Rather than analyzing features idiosyncratic to specific deviant behaviors, however, the present study is concerned with general classes of situations that are relevant to many types of deviant behavior. No doubt additional situational contingencies apply to some deviant acts, such as being in stores for shoplifting, being with a potential partner for precocious sexuality, and being in a position of financial trust for embezzlement.

Time with Peers

Situations conducive to deviance are especially prevalent in time spent with peers. Gold's (1970) "pickup game" analogy emphasizes the group nature of most deviance and fits with the abundant evidence that most illegal behavior occurs in the company of others (Erickson and Jensen 1977). Research reviewed above reveals that individuals who spend more time with friends engage in deviant behavior more frequently.

Being with peers can increase the situational potential for deviance by making deviance easier and rewarding. Though deviant behavior is rarely difficult or complex (Gottfredson and Hirschi 1990), companions can serve as useful resources. Friends are a common source of illicit drugs; being accompanied by friends reduces the danger in challenging a rival to a fight; and having a partner to serve as look-out can enhance the chances of success at theft.

The companionship of friends is even more central to the symbolic rewards of enhanced status and reputation. Deviant exploits bolster a social identity as brave, adventuresome, or tough only when they come to the attention of others. The presence of friends may not be required to garner status, but it enhances credibility. In this vein, Gold's (1970:98) "pickup game" analogy emphasizes that deviance is often a performance, for which the peer group provides an appreciative audience.

This is not to say that the presence of peers is a necessary condition for deviant behavior (Erickson and Jensen 1977; Gold 1970:98). We simply claim that, other things being

equal, spending more time with peers exposes an individual to more situational inducements to deviance, and this leads to higher rates of deviance.

The Absence of Authority Figures

In Cohen and Felson's (1979) routine activity theory, the last element necessary for predatory crime is the absence of capable guardians. By guardianship, they do not mean special skills or security arrangements; they conclude, for example, that the simple presence of a person in a house greatly reduces the chance of a burglary.

The term "guardian" is apt for predatory crime, which involves a target, but it is less suitable for other forms of deviance. Felson (1986) addressed this issue by adding a fourth element to the earlier formulation: the absence of a "handler," a person capable of exercising social control over the potential offender. The handler role differs from the guardian role in that it concerns a relationship to the potential offender rather than to a valuable object or potential victim. Felson used his addition to integrate the routine activity perspective with Hirschi's (1969) social control theory, reasoning that individuals with strong social bonds will be more easily "handled."

We prefer to develop a strictly situational explanation of individual deviance that does not invoke individual characteristics, such as social bonds (e.g., relationships with conventional individuals and institutions). Gibbs's (1981) conceptual analysis of social control is useful in this regard. He defined social control as the use of social means to manipulate the behavior of others (p. 78). Because the functions of "guardian" and "handler" reflect the impact of the presence of others on the likelihood of deviance, they constitute social control in Gibbs's sense. In accordance with the routine activity perspective, these roles characterize the *situation*, not the potential offender. Specifying that the presence of others serves a social control function need not presume that the potential offender has strong social bonds. Indeed, Gibbs (1981:146–47) holds that theories of social bonding (e.g., Hirschi's social control theory) do not concern social control as he defines it.

Generalizing the handler and guardian roles, we state that a situation is more conducive to deviance if no authority figure is present. By authority figure, we mean someone whose role in a situation carries a responsibility for attempting to exert social control in response to deviance. Though people without this role obligation (e.g., peers and passersby) may attempt such social control, they are less likely to do so. The authority figure's obligation to intervene may stem from a role in the setting, as in sales clerks who would be expected to take action when they observe shoplifting or to intervene in a fight on the premises. This corresponds to the "place manager" in Eck's (forthcoming) analysis of crime and places. Relationships with the potential offender, such as parent, teacher, or supervisor, may also bring obligations to exert social control. Note that the social control function resides in the authority figure's role obligations, not in the actor's bonds to the authority figure. Whether you like or dislike your father, it will be more convenient to smoke marijuana when he isn't around.

In industrial society, role relationships subordinate to authority figures are ubiquitous in the settings of work, school, and family of origin. This implies that situations conducive to deviance are most prevalent during leisure activities away from senior family members. Accordingly, prior research shows that activities most highly associated with deviance reflect either peer-centered leisure activities or activities that take place away from home. Felson has treated the balance of activities in the company of parents versus friends in adolescents' lives as especially pertinent to the routine activity perspective (Felson 1994; Felson and Gottfredson 1984).

Structured Versus Unstructured Activities

Unstructured activities that carry no agenda for how time is to be spent should be more conducive to deviance for two reasons. First, activities that are organized are likely to place some individuals in roles that make them responsible for social control. For example, athletic contests usually involve coaches, organized clubs have officers, and at restaurants and theaters employees are

charged with maintaining order. Second, structured activities offer *fewer* opportunities for deviance. Obviously, a person cannot engage in a deviant act without at least one opportunity to do so. Yet, the minimal opportunities needed to make deviant activities possible are so widespread that this sort of *absolute exposure* to opportunity is of little empirical or theoretical interest. As Gottfredson (1981) made clear, the routine activity perspective directs our attention to *relative exposure* to opportunities, as reflected in *how much* time a person spends in situations conducive to deviance. The amount of structure in an activity is relevant here because greater structure means that more time will be spent in designated ways, and this time will not be available for deviance.

This is not to say, however, that spending time in structured activities reduces deviance (as in Hirschi's [1969] concept of involvement). As Felson (1994:108) notes, participation in organized activities may as easily increase as decrease time spent in other activities that are conducive to deviance. Time in organized activities could take away from low-risk pursuits, such as watching television or doing household chores. Organized leisure activities, such as participating in clubs or sports, can potentially provide resources that enable deviance (Agnew 1990), indirectly leading to more extensive unstructured, unsupervised socializing by expanding friendship networks, taking one farther from home at later hours, and so forth. The previously mentioned inconsistent empirical support for the bond of involvement is understandable in this light.

DESCRIPTION OF THE PRESENT STUDY

This study tests our version of the routine activity perspective by investigating the longitudinal relationship between routine activities and individual offending. The cross-sectional designs of previous studies leave open the possibility that the observed relationship between routine activities and deviance is spuriously generated by other factors related to both, such as sensation-seeking, school failure, or attachment to parents. We use a longitudinal design to control for such stable individual differences.

We attempt to distinguish which routine activities are most related to deviant behavior. Previous studies either have investigated only a few activities (Hirschi 1969; Wallace and Bachman 1991) or have constructed indices that combine unstructured, unsupervised socializing with less relevant activities, such as going to a school dance (where one finds authority figures; Hundleby 1987), or talking on the telephone (which typically occurs at home; Agnew and Peterson 1989).

Our national sample of 18- to 26-year-olds picks up where the available research on junior and senior high school students leaves off. Data on this older age span is valuable for establishing that past evidence about the relevance of routine activities is not merely a by-product of adolescents' precocious involvement in adult activities or of the dominance of school and family of origin in adolescents' lives.

We also address the connection between the social structure and individual offending. The routine activity perspective is a theory of the social embeddedness of crime and deviance. In extending the perspective to individual offending, we examine the potential role of routine activities as a mediator between structural variables and deviance. Our analysis includes three primary dimensions of social differentiation: age, sex, and social status.

We are especially interested in the potential of routine activities for explaining the relationship of age to deviant behavior. Hirschi and Gottfredson (1983) documented that crime rates vary greatly with age, and similar age trends have been observed for various types of substance use (Johnston, O'Malley, and Bachman 1992). Hirschi and Gottfredson (1983) argue that available theories of crime and deviance are not able to explain these age trends. Indeed, although delinquency and illicit drug use during adolescence have been the major focus of theories of deviance, these theories have offered little insight into how changes experienced during and after adolescence could produce the age trends that have been observed. The routine activity perspective directs our attention to age-related changes in the activities of everyday life. Indeed, there is evidence of striking age trends in many such activities (Larson and Bradney 1988; Larson and Richards 1991; Osgood and Lee 1993).

METHOD

Sample

Our data come from the Monitoring the Future study. This ongoing study began in 1975 and gathers a wide range of information annually from a nationally representative sample of high school seniors. Each year, a three-stage national probability sample is drawn, and questionnaires are administered in approximately 130 high schools (roughly 110 public and 20 private). This procedure yields 15,000 to 19,000 respondents annually. A random one-fifth of each sample completes the version of the questionnaire that we use here. For a detailed description of the sample design and data collection, see Bachman, O'Malley, and Johnston (1991).

We use the follow-up portion of the study, which includes a subsample of one-fifth of each senior class sample.[2] Half the participants in the follow-up study complete mailed questionnaires in every odd-numbered year after graduation; the other half do so every even-numbered year. Response rates for the base year average 80 percent, and follow-up response rates are generally 75 percent or more of the original group. The follow-up study oversamples the more serious drug users in high school to obtain more accurate estimates for this segment of the population; the oversampled individuals are then given smaller weights in analyses to yield a representative sample.

The analysis is based on high school senior classes of 1977 through 1981. Five waves of data are used, obtained at the approximate ages of 18, 19, 21, 23, and 25 or 18, 20, 22, 24, and 26. We included only those cohorts that had progressed through at least four of the five data waves, and respondents were included in the analyses only if they had valid data for at least three of the five questionnaires. Sample sizes ranged from 1,782 to 1,840 across the five dependent variables.

Because Monitoring the Future does not sample individuals who leave high school before spring of their senior year, our findings are generalizable only to high school

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[2] The raw data from the longitudinal study are not publicly available, but researchers may contact the authors to obtain covariance matrices.

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graduates, a group that represents about 80 percent of the all the age cohorts. Although dropouts tend to have higher rates of deviant behaviors, such as drug use (SAMSHA 1993) and delinquency (Fagan and Pabon 1990), their relatively small proportion of the population reduces the potential for bias in our parameter estimates. Moreover, bias will occur only if relationships among these variables are different for dropouts than for graduates, and we have no reason to suspect this is so. Although a broader sample would be desirable, the Monitoring the Future dataset remains one of the best available for studying deviance during late adolescence and early adulthood.

Measures

Routine activities. To minimize the problem of theoretical indeterminacy articulated by Meier and Miethe (1993), we restricted our analysis to activities that would be least subject to alternative interpretations under other theoretical perspectives. Thus, we eliminated items about time spent at work, in school, and in religious activities as reflecting commitment to conventional lines of action, and we excluded an item about frequenting taverns, bars, or nightclubs as being too closely associated with alcohol consumption, which is illegal for a portion of this age span. Appendix A presents the questions and response categories for the 13 activities that were included in the analysis.[3]

Four of the 13 activities we include typically entail unstructured socializing with peers in the absence of responsible authority figures, as is specified by our theoretical analysis: riding around in a car for fun, getting together with friends informally, going to parties, and spending evenings out for fun and recreation. Five of the remaining activities typically occur outside the home: going on dates, going to movies, participating in

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[3] To simplify the analyses, three items—reflecting playing music or singing, doing creative writing, and doing arts or crafts—were eliminated. The eliminated items are included in Appendix A. Preliminary analyses indicated that these relatively infrequent activities played no important role in the results. Preliminary results are available from the first author, as are the results of all other analyses to which we refer.

community affairs or volunteer work, participating in active sports, and going shopping. In this age range, we would expect that most of these activities occur away from parents, and dating and going to movies imply socializing with others. Unlike the first four activities, however, these activities are more structured—they entail a somewhat definite and partly constrained agenda. The remaining four activities are more likely to occur in the home and are less likely to involve companionship: working around the house, watching television, relaxing alone for an hour or more, and reading.

Other explanatory variables. Our analysis included four variables reflecting structural differentiation. The first of these is age. Because all respondents were high school seniors at the start of the study, timing of the waves of data collection is the principle source of variation in age. Therefore, the base year wave of data was defined as age 18, and age for each subsequent wave was defined as 18 plus the number of years since the base year. We allowed for a curvilinear relationship between age and deviance by including both age and age squared in our models.

The initial questionnaire assessed the remaining structural variables. Sex was coded as 0 for males and 1 for females. The only available indicator of socioeconomic status for the family of origin was parents' average education, on a scale of 1 (grade school or less) to 6 (graduate or professional school). Respondents were asked to answer the questions about education with regard to whatever parent figures were "most important in raising" them. More pertinent to respondents' future socioeconomic prospects, we also included respondents' self-reported average high school grades (coded 1 for D or below, 2 for C–, 3 for C, 4 for C+, and so on through 9 for A).

Control variables. Traffic tickets and accidents, our measures of dangerous driving, are necessarily a function of both individual driving practices and time at risk (i.e., time spent driving). Therefore, in analyses of dangerous driving we controlled for a measure of how far respondents drive in an average week, ranging from 1, for not at all, to 6 for more than 200 miles.

A limited portion of our analysis concerns stable individual differences in deviance, and

some of these models include a number of additional control variables: urbanicity (1 to 5 scale for population size of area of residence), plans to attend a 4-year college (1 to 4 scale), two dummy variables for race (African American and White versus other), three for region of the country (Northeast, North Central, and West versus South), five for year of high school senior class, five indicating whether or not a respondent had valid data for each data wave, and four indicating whether a respondent had missing data for sex, parent's education, high school grades, and college plans. Mean values were substituted for missing values on those variables, and including these dummy variables allowed for the possibility that individuals with missing values systematically differed in their deviant behavior.

Deviant behaviors. Our analysis includes self-report measures of five types of deviant behavior: criminal behavior, heavy alcohol use, marijuana use, use of other illicit drugs, and dangerous driving. These behaviors represent a broad range of conventionally proscribed activities that are common in late adolescence. Factor analytic studies of substance abuse have shown that use of alcohol, marijuana, and hard drugs are relatively distinct phenomena (Hays et al. 1986), so we consider them separately.

Our 10-item measure of *criminal behavior* was used in the Youth in Transition study (Bachman, O'Malley, and Johnston 1978); it is adapted from Gold's (1970) well-known measure. Three items concern violent offenses, such as serious fights and robbery, while the remaining 7 items concern property offenses of theft, trespassing, and arson. We excluded 4 items pertaining to offenses at work or school because they are tied to age-specific role statuses. Responses to each item ranged from 0, for not engaging in the behavior at all during the past year, to 4, for committing the offense five or more times during that period. The index for criminal behavior was the sum of scores across the 10 items.

We measured *heavy alcohol use* by the number of occasions in the preceding two weeks a respondent had 5 or more drinks in a row. Scores ranged from 0 through 5 (10 or more times). The scale for *marijuana use* ranged from 0 (for no use in the past 12 months) through 9 (40 or more times in the

last 30 days). *Use of other illicit drugs* was measured as a sum across eight drugs, each one scored on the same scale as marijuana use: LSD, other psychedelic drugs, cocaine, quaaludes, barbiturates, tranquilizers, heroin, and other narcotics. Our measure of *dangerous driving* was the sum of traffic tickets and traffic accidents reported by the respondent for the past 12 months. Possible scores for each of these were 0 through 4 (4 or more).

Osgood et al. (1988) obtained estimates of the reliability of these measures as part of a longitudinal causal model based on Heise's (1969) approach. They reported reliabilities of .70 for criminal behavior, .70 for heavy alcohol use, .90 for marijuana use, .76 for use of other illicit drugs, and .49 for dangerous driving. Alpha reliabilities for the multiple-item measures were .78 for criminal behavior, .81 for use of illicit drugs other than marijuana, and .48 for dangerous driving.

RESULTS

The first phase of our analysis tests our hypothesis that activities involving unsupervised and unstructured socializing with peers will be closely associated with deviance; the second assesses the role of routine activities as a mediator between structural variables and deviance.

Analysis Strategy

A primary goal of our analytic strategy is to focus on the utility of routine activities for explaining *within-individual change in deviant behavior*. By using a "fixed-effects" panel model, which limits the analysis to within-individual change, we ensure that our findings cannot be due to any stable individual differences, whether measured or not (Petersen 1993:447). Thus, we capitalize on the strengths of our longitudinal data to control for selection factors, which has not been possible for previous studies of activities and deviance. Although we still cannot rule out the possibility that results are due to changing but unmeasured variables or to time-varying effects of stable variables, our approach is a more stringent test than previous cross-sectional analyses.

Our primary analysis takes the form of a pooled time series and cross-sections design,

meaning that each wave of data for each individual is treated as a separate case. This is an appropriate strategy for assessing relationships in panel data when changes of mean levels over time are of interest (Hsiao 1986; Petersen 1993). Because the multiple observations for a single individual are not statistically independent, it would be inappropriate to apply ordinary least squares to data in this form. Though unbiased, estimates of standard errors would be incorrect.

We used the "fixed-effects" estimator, which is one of the two common approaches to correcting for violations of the assumption independence that are due to stable individual differences (Petersen 1993). This approach has the advantage of restricting the analysis to within-individual changes for both the independent and dependent variables. The alternative approach, the "random-effects" estimator, is somewhat more efficient, but a modest loss in statistical power was not problematic with our sample size. Furthermore, unlike the fixed-effects estimator, the random-effects estimator assumes a normal distribution of the stable individual differences (Petersen 1993:447–48), which is a poor match to our skewed dependent variables. We implemented the fixed-effects model by converting all variables to deviations from each individual's mean across time and conducting ordinary least squares regression on those within-individual deviations.[4]

This fixed-effects model does not correct for serially correlated error, which is a second potential source of violations of the assumption of independence. Stimson (1985) concluded that serially correlated error is relatively unimportant in cases such as ours, where the sample is large and there are relatively few waves of data. Our results support his view in that the correlations between residuals, although higher for adjacent waves,

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[4] Data in this form are constrained to sum to 0 across waves, reflecting a loss of one degree of freedom per individual (used to calculate the individual mean). A modified sample weight corrects the degrees of freedom:

$$w'_i = w_i \frac{t_i - 1}{t_i},$$

where w_i is the original sample weight for individual i (based on the over-sampling of more serious drug users), w'_i is the modified sample weight, and t_i is the number of waves of valid data.

were still substantial over longer intervals. Furthermore, we obtained virtually identical results when we replicated our analyses using hierarchical linear models (Bryk and Raudenbush 1992) that allowed for serial correlation through random effects in stable individual differences and age trends.

Examination of residuals from preliminary analyses indicated extremely skewed distributions for criminal behavior, use of illicit drugs other than marijuana, and dangerous driving. To improve these distributions, we transformed the data before subtracting the individual means. The natural logarithm was taken for criminal behavior and the use of illicit drugs other than marijuana, and the square root of dangerous driving was taken (in all cases after adding 1 to the original score). Also, prior to making the transformations, we recoded scores for criminal behavior to a maximum of 20 and illicit drug use to a maximum of 25. Less than 1 percent of scores fell above those levels, so we did not think it was meaningful to distinguish among them. Finally, the three transformed variables were multiplied by 10 to compensate for their reduced ranges.

Activities and Deviance

Table 1 presents coefficients from the regressions of change over time in five deviant behaviors on change in routine activities. For each deviant behavior, routine activities explained significant amounts of variance not accounted for by age: from 1.2 percent to 10.9 percent. In accord with prior research and our theoretical analysis, there were consistent positive associations between the four unstructured socializing activities and the five deviant behaviors: Riding in a car for fun, visiting with friends, going to parties, and spending evenings out coincided with criminal behavior, heavy alcohol use, marijuana use, use of other illicit drugs, and dangerous driving. These activities typically accounted for the largest share of the variance explained by the set of 13 activities. All but one of the twenty relevant coefficients were positive, and each of the four unstructured socializing activities was significantly associated with at least three of the five deviant behaviors.

Results for the other five activities typically occurring outside the home were in

marked contrast to findings for unstructured socializing: Deviant behavior was not positively associated with going on dates, going to movies, being involved in community affairs, engaging in active sports, or going shopping. Thus, it is not merely spending time outside the home or socializing that leads to deviant behavior. The only nominally significant positive association between these routine activities and deviance was the relationship between dangerous driving and going to movies, and this relationship would not be judged statistically significant under a Bonferroni correction for testing the association with five deviant behaviors (i.e., altering the alpha level to .01).

It is particularly interesting that once we controlled for other activities there was little indication that going on dates or going to movies leads to deviant behavior. These forms of socializing take place out of the home, and they had been included in composite measures of socializing that were associated with deviance in prior research (Agnew and Peterson 1989; Hirschi 1969: 168; Hundleby 1987). We did find positive zero-order correlations between these two activities and most of the deviant behaviors (results not shown), but those correlations appear to result from higher rates of dating and movie attendance among individuals who more frequently engage in the unstructured activities.

Conversely, controlling for dating and going to movies helps clarify the meaning of some of the other socializing activities. Going to parties and evenings out for fun are broad categories that may encompass anything from a formal dinner party to hanging out on a street corner. Because our regression models include the entire set of 13 activities, however, the coefficients for parties and evenings out are adjusted for rates of dating, going to movies, and the other more structured activities. This gives us more confidence that findings for the first four unstructured socializing activities are largely limited to informal, unstructured and unsupervised socializing with peers, in accord with our theoretical analysis.

For the nine activities other than unstructured socializing, the statistical significance of several of the coefficients surpasses the $p < .05$ level, but these results must be inter-

Table 1. Unstandardized Regression Coefficients and Variance Explained from Within-Individual Regressions of Five Deviant Behaviors on Routine Activities: Ages 18 to 26, Monitoring the Future Study

Routine Activity	Criminal Behavior		Heavy Alcohol Use		Marijuana Use		Other Drug Use		Dangerous Driving	
	b	(S.E.)	b	(S.E.)	b	(S.E.)	b	(S.E.)	b	(S.E.)
Unstructured Socializing										
Ride for fun	.359*	(.084)	.033*	(.014)	.113*	(.022)	.105	(.068)	.176*	(.047)
Visit with friends	.177	(.114)	.083*	(.019)	.068*	(.030)	.289*	(.092)	−.002	(.063)
Go to parties	.927*	(.122)	.329*	(.020)	.350*	(.032)	.438*	(.098)	.117	(.068)
Evenings out	.195*	(.077)	.138*	(.013)	.117*	(.021)	.355*	(.062)	.121*	(.043)
Other Activities Outside the Home										
Go on dates	.015	(.067)	−.030*	(.011)	−.028	(.018)	−.091	(.054)	.063	(.037)
Go to movies	.068	(.141)	−.037	(.023)	−.025	(.038)	−.085	(.114)	.175*	(.078)
Community affairs	−.127	(.104)	−.009	(.017)	−.082*	(.028)	−.252*	(.084)	−.048	(.058)
Active sports	.100	(.085)	−.024	(.014)	−.024	(.023)	.038	(.068)	.038	(.047)
Go Shopping	−.184	(.118)	−.015	(.020)	−.053	(.032)	−.137	(.096)	−.001	(.066)
At-Home Activities										
Work around house	−.162	(.095)	−.045*	(.016)	−.077*	(.025)	−.078	(.076)	−.124*	(.053)
Watch TV	−.136	(.136)	−.003	(.022)	−.097*	(.036)	−.212	(.109)	.015	(.075)
Relax alone	.077	(.085)	.030*	(.014)	.069*	(.023)	.201*	(.068)	.043	(.047)
Read book or magazine	−.053	(.116)	−.023	(.019)	−.040	(.031)	−.092	(.093)	−.026	(.064)

Unique Variance Explained	R^2	d.f.	R^2	d.f.	R^2	d.f.	R^2	d.f.	R^2	d.f.
All activities	.0225	13	.1089*	13	.0545*	13	.0235*	13	.0121*	13
Unstructured activities	.0188*	4	.1012*	4	.0457*	4	.0184*	4	.0060*	4
Age	.0461*	2	.0047*	2	.0067*	2	.0129*	2	.0051*	2
Total	.1505*	15	.1194*	15	.0825*	15	.0297*	15	.0550*	16
S.D.	5.334		.837		1.341		3.990		2.709	
N (weighted)	5,986		5,712		5,817		5,930		5,715	

Note: The bs are unstandardized regression weights; their standard errors are in parentheses.
* $p < .05$

preted cautiously. None would be judged statistically significant under a Bonferroni correction for the 45 significance tests involved (i.e., nominal alpha level of .0011 and *t*-value of 3.6). Of the 20 coefficients for unstructured socializing, 11 would remain statistically significant under this criterion.

One of the more consistent trends among these nine routine activities was that spending more time relaxing alone was associated with higher levels of deviance. This is interesting in that relaxing alone would constitute unstructured solitary activity, rather than socializing activity. Conversely, participation in community affairs and working

around the house both were consistently associated with lower rates of deviance. Thus, these three activities seem to merit attention in future research.

Routine Activities, Social Structure, and Deviant Behavior

Much of the reason for *sociological* interest in routine activities is to explore a possible link between broad social structural categories and important social outcomes by examining the content of everyday life. We now examine (1) whether location in the social structure shapes people's lives in terms of

these routine activities, and (2) the degree to which these activities account for relationships between dimensions of social stratification and deviant behavior.

We focus on four variables relevant to social structural differentiation: age, sex, high school grades, and parents' education. Age and sex are the two dimensions of social stratification most related to a broad set of measures of criminal behavior (Jensen and Rojek 1992). High school grades and parents' education reflect two important aspects of social class in the transitional world of 18- to 26-year-olds. Parents' education is an indicator of the social class of the family of origin, and high school grades are an indicator of adolescents' trajectories as they seek their own position in the social hierarchy. Neither race, region, urbanicity, nor college plans was strongly or consistently related to deviant behavior, after controlling for the other structural variables.

Age. We are especially interested in whether age-related changes in routine activities can explain some portion of the age trends observed in deviant behaviors. This could occur only if there were similarly shaped age trends for routine activities *and* deviant behavior—but that alone is not enough. As Hirschi and Gottfredson (1985) point out, there are many variables that show similar age trends. The difficulty here lies in demonstrating that an explanatory variable has individual level relationships to both age and deviance that are strong enough to account for the relationship between them.

Table 2 presents the results of within-individuals (fixed-effects) analyses of age trends in the activity measures and shows significant age-related changes for all of the activities except shopping. Computing fitted values from these coefficients yields a pattern of declining frequency for almost all of the routine activities over this age span, with the fastest decline at age 18 and the slowest at age 26.[5] There were large age trends for all

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[5] The terms for both linear age and age squared are based on a transformation of the age variable to a value of 0 at age 22. Thus, the coefficients for linear age in Table 2 reflect the slope at age 22, and the pattern of coefficients observed in Table 2 (negative for linear age and positive for age squared) is consistent with our description of the age trends.

four of the unstructured socializing activities, which were closely associated with deviance; coefficients correspond to a decrease of more than one full standard deviation in each activity over this age span.

To assess the degree to which routine activities explain the relationship between age and deviant behavior, we examined the change in that relationship with activities controlled. One normally accomplishes this by comparing a coefficient before controls (the total effect) to the same coefficient after controls (the direct effect); the difference between these coefficients indicates the extent of mediation (indirect effect). The present problem is somewhat more complex, however, because the age trend is a quadratic relationship that involves two coefficients. Explained variance (R^2) is a poor substitute for the regression coefficient because it will be reduced by any correlated explanatory variables, even when they do not decrease the direct effect. To resolve this, we created a coefficient $\tilde{b}$ that summarizes the magnitude of the age trend in the same metric as the usual unstandardized regression coefficient. We defined $\tilde{b}$ as the standard deviation across age levels of the fitted values implied by the two age coefficients (holding other variables constant), divided by the standard deviation of those age values. (For a linear relationship this calculation yields the original regression coefficient.)

Table 3 summarizes the relationship of age to within-individual change in deviant behavior, based on fixed-effects models with and without controls for routine activities. Routine activities explain a substantial portion of the age-related change in criminal behavior, heavy alcohol use, marijuana use, and dangerous driving; controlling for routine activities reduced the age trends in these behaviors by 27 percent to 48 percent. Age trends had been most dramatic for criminal behavior (see Table 1). Here, routine activities explained a smaller proportion of the age trend, but a similar absolute amount of the trend. For use of illicit drugs other than marijuana the results are rather different: Controlling for routine activities increased rather than decreased the age trend (thus, the negative proportion explained in Table 3).

Figure 1 (see page 650) illustrates these findings. It shows age trends for three of the

Table 2. Unstandardized Coefficients from Separate Regressions of Routine Activities on Age, Sex, High School Grades, and Parents' Education: Ages 18 to 26, Monitoring the Future Study

Routine Activity	Age			Sex (Female = 1)		High School Grades		Parents' Education	
	Age	(Age)^2	R^2	b	(S.E.)	b	(S.E.)	b	(S.E.)
	b	b							
Unstructured Socializing									
Ride for fun	−.146	.0236	.235*	−.383*	(.043)	−.148*	(.011)	−.153*	(.018)
Visit with friends	−.107	.0024	.161*	−.193*	(.027)	−.004	(.007)	.095*	(.011)
Go to parties	−.085	.0024	.124*	−.183*	(.030)	−.012	(.008)	.117*	(.013)
Evenings out	−.134	.0038	.117*	−.411*	(.040)	−.061*	(.011)	.073*	(.017)
Other Activities Outside the Home									
Go on dates	−.042	−.0124	.008*	.007	(.047)	−.001	(.013)	.033	(.020)
Go to movies	−.062	.0014	.097*	.069*	(.021)	.018*	(.006)	.043*	(.009)
Community affairs	−.031	.0097	.035*	−.015	(.031)	.066*	(.008)	.079*	(.013)
Active sports	−.052	.0026	.030*	−.405*	(.043)	.067*	(.012)	.188*	(.018)
Go shopping	−.002	.0008	.000	.435*	(.023)	.004	(.007)	−.023*	(.011)
At-Home Activities									
Work around house	.004	.0134	.013*	.314*	(.032)	−.032*	(.009)	−.090*	(.014)
Watch TV	.029	.0092	.019*	−.015	(.024)	−.052*	(.006)	−.077*	(.010)
Relax alone	−.023	−.0081	.005*	.005	(.033)	.007	(.009)	.060*	(.014)
Read book or magazine	.007	−.0029	.003*	−.005	(.029)	.057*	(.008)	.074*	(.012)

Note: The bs are unstandardized regression weights (their standard errors are in parentheses).
*$p < .05$

deviant behaviors (as fit by the regression models), before and after adjusting for routine activities. For four of the five deviant behaviors, a downward age trend was reduced or reversed by controlling for routine activities (in Figure 1, criminal behavior and heavy alcohol use show this effect). Unlike the other deviant behaviors, use of other illicit drugs varied little by age, showing only a slight peak at age 22. Illicit drug use was associated with unstructured socializing, however, which declined with age. Controlling for routine activities increased this modest age trend because use of these drugs at later ages was higher than would be expected, relative to the decline in unstructured socializing. This pattern would be consistent with a change in the context of use for these "harder" drugs, with use at older ages being more solitary and persistent, rather than largely limited to social contexts, such as informal parties and hanging out with friends.

Sex. The analyses reported above are limited to within-individual changes in deviant behaviors, using the fixed-effects correction for individual differences. This approach is applicable only to independent variables that vary over time for at least some individuals (Petersen 1993:448), and our measures of sex, high school grades, and parents' education do not vary over time. Thus, we conducted a separate analysis based on individual means over time on independent and dependent variables. These means correspond to the between-individuals variance not used in the within-individuals, fixed-effects analysis. This separation of the analyses of within-individual variation and between-individual variation is a standard feature of analysis of variance, and it also applies within a multiple regression framework (Judd and McClelland 1989, chap. 14–15).

Table 2 shows the relationships of sex, high school grades, and parents' education to the 13 routine activity measures, which are assessed by bivariate between-individuals regressions (i.e., not controlling for any other variables). These results indicate that there are substantial differences between the sexes in the routine activities of everyday life during late adolescence and early adulthood. Females participated in the unstructured social-

Table 3. Within-Individual and Between-Individual Regression Models Showing the Impact on Selected Group Differences in Deviant Behavior of Controlling for Routine Activities: Ages 18 to 26, Monitoring the Future Study

Deviant Behaviors	Without Controls for Activities		With Controls for Activities		Proportion Explained
	$\tilde{b}$	R^2	$\tilde{b}$	R^2	
Age Differences					
Criminal behavior	.690	.128*	.505	.046*	.268
Heavy alcohol use	.041	.011*	.023	.005*	.444
Marijuana use	.112	.028*	.058	.007*	.482
Other illicit drug use	.107	.006*	.184	.013*	−.717
Dangerous driving	.174	.023*	.104	.005*	.405
	b	(S.E.)	b	(S.E.)	Proportion Explained
Sex Differences					
Criminal behavior	−3.300*	(.242)	−2.790*	(.276)	.155
Heavy alcohol use	−.610*	(.046)	−.336*	(.044)	.449
Marijuana use	−.519*	(.109)	−.007	(.114)	.986
Other illicit drug use	−.552*	(.259)	.360	(.284)	1.653
Dangerous driving	−1.065*	(.108)	−.886*	(.122)	.168
High School Grades					
Criminal behavior	−.271*	(.071)	−.109	(.071)	.598
Heavy alcohol use	−.105*	(.014)	−.043*	(.011)	.595
Marijuana use	−.215*	(.032)	−.087*	(.030)	.594
Other illicit drug use	−.472*	(.076)	−.221*	(.073)	.531
Dangerous driving	−.145*	(.030)	−.102*	(.030)	.298
Parents' Education					
Criminal behavior	.219	(.113)	.058	(.111)	.734
Heavy alcohol use	.054*	(.021)	.007	(.018)	.869
Marijuana use	.146*	(.051)	.076	(.046)	.477
Other illicit drug use	.457*	(.121)	.319*	(.115)	.300
Dangerous driving	.155*	(.048)	.114*	(.047)	.262

Note: The b's are unstandardized regression weights (their standard errors appear in parentheses); $\tilde{b}$ is an approximation to b for a curvilinear relationship. R^2 reflects variance solely attributable to age. Proportion explained refers to the proportionate reduction in b or $\tilde{b}$ produced by controlling for the 13 routine activities.

* $p < .05$

izing activities much less often than did males, as would be consistent with sex differences in deviant behavior. The other large sex differences in activities matched common gender stereotypes: Males more frequently participated in active sports while females more frequently went shopping and worked around the house.

Table 3 indicates the magnitude of sex differences in the five deviant behaviors, with and without controlling for routine activities.

Before controlling for activities, males engaged in all of the deviant behaviors significantly more often than females. The difference was largest for criminal behavior and heavy alcohol use (over half a standard deviation in both cases) and the smallest difference was for use of drugs other than marijuana (about one tenth of a standard deviation). Controlling for routine activities reduced all of the sex differences, but the degree of reduction varied considerably across
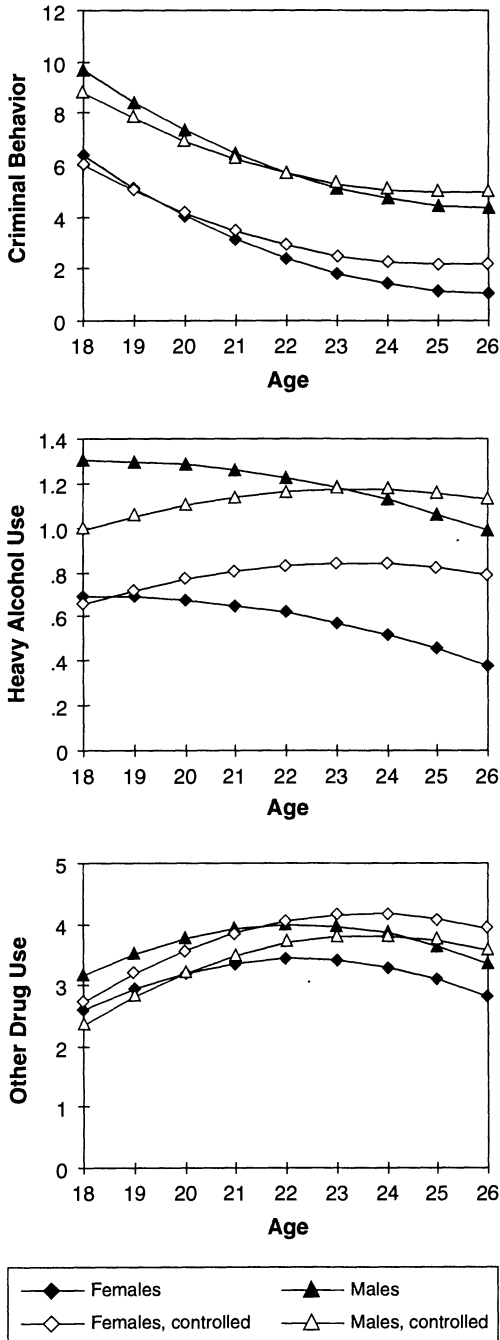
the behaviors. Routine activities accounted for virtually all of the sex differences in marijuana use and use of other illicit drugs. About half of the sex difference in heavy alcohol use was attributable to routine activities, but only 16 percent for criminal behavior and 17 percent for dangerous driving. Figure 1 gives a visual representation of the extent to which routine activities mediate the relationships of sex and age to the deviant behaviors. The distance between the lines for females and males is smaller after controlling for routine activities, which illustrates that routine activities account for much of the sex difference in deviance. The figure shows that once we control for routine activities, females' use of illicit drugs other than marijuana slightly exceeds that of males.[6]

High school grades. Table 2 also indicates that 18- to 26-year-olds who differed in their high school grades differed substantially in their everyday activities as well. Better high school grades were strongly associated with less frequently riding in a car for fun and spending evenings out, two of the four unstructured socializing activities. Respondents with better grades also had especially high rates for the more structured activities of community affairs and active sports. Accordingly, controlling for routine activities considerably reduced the relationship between high school grades and deviant behavior. As Table 3 reveals, rates for all five deviant behaviors were higher for respondents who had lower high school grades, and at least half of the relationship between grades and deviant behavior was explained by routine activities, except in the case of dangerous driving (30 percent).

These findings indicate that the lower rates of deviance among people who succeed at school is not simply a reflection of commitment to conventional avenues of success, as

Figure 1. Fitted Relationships of Age and Sex to Deviant Behaviors, Before and After Controlling for Routine Activities: Ages 18 to 26, Monitoring the Future Study

Note: See the text on page 643 for a description of the scales measuring criminal behavior, heavy alcohol use, and other drug use, and page 645 for transformations applied to the scales.

[6] We also examined sex differences in the relationship of deviant behavior to age and to routine activities. Though many of these interactions were statistically significant, the substantive relationships of both age and routine activities to deviant behavior were the same for both males and females. Typically, relationships were somewhat stronger for males than for females, which is a common result of the combination of higher rates of deviance for males and skewed measures of deviance.

is portrayed by social control theory (Hirschi 1969). Students who succeed at school spend their time in ways that present them with fewer opportunities for deviance, and this explains much of the relationship.

Parents' education. Because parents' education is a major component of socioeconomic status, one might expect this variable to be negatively associated with deviant behavior. Yet research over the past two decades shows that links between social class and deviance are elusive (Tittle, Villemez, and Smith 1978). Indeed, we found that for these respondents, having parents with more education was associated with higher levels of deviant behavior (significantly so for all except criminal behavior), and this was true both before and after controlling for factors such as sex and high school grades (see Table 3). Table 2 indicates that this finding is consistent with most (though not all) relationships between parents' education and respondents' routine activities.

Table 3 shows that controlling for routine activities explains much of the observed relationship between parents' education and respondents' deviant behavior. This was most true for criminal behavior and heavy alcohol use, where routine activities accounted for 73 percent and 87 percent of the relationships, respectively. Routine activities explained 26 percent to 48 percent of the association between deviance and parents' education for the remaining three deviant behaviors. Consistent with Agnew's (1990) notion of resources for deviance, it appears that higher levels of parental social class offer youth greater freedom of movement and more time for socializing, which enable higher rates of deviant behavior.

An Alternative Model

We developed a structural equation model to address some limitations of our primary analysis. Although space permits only a brief discussion of this model, the results provide valuable corroboration for the fixed-effects analysis we have presented. The purpose of the structural equation model was: (1) to correct for error in the measures of routine activities, (2) to adjust for serially correlated error, (3) to treat the skewed measures of deviance as ordinal rather than interval, and (4)

to maintain the separation of within-individual and between-individual relationships. Full details of this model are available from the first author on request.

The structural equation analysis confirmed that there were strong relationships between unstructured socializing activities and all five forms of deviance. Also, the within-individual and between-individual relationships between activities and deviance were of comparable magnitude, which had not been true of the fixed-effects analysis. Further, the structural equation results indicated that routine activities mediate much of the relationship between the structural variables and deviant behaviors. The structural equation and fixed-effects analyses yielded very similar estimates of the extent of mediation for sex, high school grades, and parents' education, but the two analyses diverged for age. Where routine activities accounted for 27 percent of the relationship between age and criminal behavior in the fixed-effects model, this figure rose to 88 percent in the structural equation model. For the other four deviant behaviors, however, the structural equation model "over-explained" the relationship of age to deviance—after controlling for activities, the relationship changed to the opposite direction.

DISCUSSION

Our theoretical analysis extends the situational explanation of crime found in the routine activities perspective to explaining individual offending and a broader range of deviant behaviors. Specifically, we have argued that situations conducive to deviance are especially prevalent in unstructured socializing activities with peers that occur in the absence of authority figures. The lack of structure leaves time available for deviance; the presence of peers makes it easier to participate in deviant acts and makes them more rewarding; and the absence of authority figures reduces the potential for social control responses to deviance.

Our results provide strong support for this hypothesis. We found consistent evidence that socializing with peers away from home and authority figures is closely related to deviant behavior, but only in the absence of a structuring agenda such as going on a date or participating in sports. The magnitude of

these relationships between routine activities and deviance is exceeded only for measures of other deviant behaviors, attitudes about deviance, and the deviant behavior of one's peers. Unlike those measures, our routine activity measures carry no direct connotations of deviance, so they are more clearly independent of the phenomena to be explained.

We found that the routine activities of everyday life are heavily dependent on structural variables, which supports a central theme of the routine activity perspective. For instance, in accord with Matza and Sykes's (1961) portrayal of adolescents as a leisure class, our results showed a consistent decline in virtually all leisure activities as respondents entered adulthood. Most pertinent to our concerns, there were dramatic age, sex, and class differences in the unstructured socializing activities most closely associated with deviance. The regression coefficients of Table 2 imply that individuals in the most deviant structural position—18-year-old males with D grade-point averages whose parents have graduate or professional degrees—typically go riding in a car for fun 110 times per year, visit informally with friends 200 times, go to 40 parties, and spend 170 evenings out for fun. In contrast, 26-year-old females who had A grades in high school and whose parents had grade school educations typically go riding in a car for fun 9 times, visit with friends informally 25 times, go to 6 parties, and spend 53 evenings out for fun. Such differences suggest that routine activities are a key intersection between the macro-level of social structure and the micro-level of individual lives. Accordingly, we found that routine activities account for much of the relationship between deviance and the structural variables of age, sex, and social status. This is not to say, however, that structural differences were entirely attributable to routine activities, as substantial portions of some of these relationships remain to be explained.

We must address a potential alternative interpretation of our findings as, instead, reflecting a short-term influence of deviance on activities. This would arise if a decision to engage in deviance precedes the decision to participate in an activity—to use the pickup game analogy, going to the basketball court in search of a game. We attempted to minimize this possibility by excluding from our analysis any routine activities that carry connotations of deviance (e.g., going to bars) in favor of those that do not (e.g., spending evenings out for fun). Indeed, this alternative explanation does not appear plausible for most of the relationships between particular types of unstructured socializing and specific deviant acts (see Table 1). In some cases, the logic simply does not apply. For instance, there is little sense in going to parties if your intent is to commit crimes like theft, assault, and vandalism. In other cases, the routine activities are simply too frequent (e.g., visiting with friends informally and spending evenings out for fun) for the less common deviant behaviors to generate the kind of increase needed to produce these findings. Nevertheless, for relationships such as going to parties and using marijuana, it remains conceivable that our findings are influenced by a process such as going to parties *because* the parties afford opportunities to smoke marijuana.

The routine activity perspective represents a radical departure from traditional concerns in the study of crime and deviance. We have attempted to apply the logic of the perspective to the traditional concern with explaining variation in individuals' rates of offending. This contributes to the utility of the routine activity perspective as a unifying approach to crime and deviance.

We suggest three directions for future research. First, we should refine and elaborate the measures of unstructured socializing activities. Better measures would more explicitly distinguish when authority figures are present from when they are not. Also, our set of four unstructured activities is only a narrow sample of the relevant universe of activities.

Although we have interpreted routine activities as a source of situations conducive to deviance, we cannot rule out the possibility that nonsituational factors might influence our results. Because of our longitudinal research design and within-individuals analysis, our findings cannot be attributed to any stable individual characteristic, such as self control. Nevertheless, we have not controlled for variation over time in other explanatory factors, such as social bonds or differential associations. Thus, there remains the possibility that within-individual changes in such

variables influenced both the routine activities and deviance to generate our findings. Future research should address this interplay of situational and nonsituational influences on individual deviance. A more sophisticated research design might also address the prospect that our findings reflect influences of deviance on routine activities, in addition to (or instead of) the influence of activities on deviance that we have assumed.

A third direction for future research is to investigate social roles as a link between social structure and the routine activities of everyday life, and correspondingly routine activities as a link between social roles and deviance. Such research would bring together the routine activity perspective and a conception of social stratification as organizing everyday activities through roles differentiated by factors such as age, sex, class, and race. In this vein, other research has found changes in substance use and criminal behavior to be closely related to changing from adolescent to adult roles in the domains of work, family, and living arrangements (Bachman, O'Malley, and Johnston 1984; Bachman et al. 1992; Horney, Osgood, and Marshall 1995; Yamaguchi and Kandel 1985). Horney et al. (1995) concluded that social control (i.e., social bonding) and routine activities are the most plausible explanations for their findings. Furthermore, Osgood and Lee (1993) provided evidence that roles in these domains are, indeed, related to routine activities.

D. Wayne Osgood is Professor of Crime, Law, and Justice and Sociology at The Pennsylvania State University. His current research interests include routine activities, criminal careers, age and deviance, and the generality of deviance.

Janet K. Wilson is Assistant Professor of Sociology at the University of Central Arkansas. While continuing research in routine activities, she is also investigating Supreme Court decisions that extend rights to victims of crime.

Patrick M. O'Malley is Research Scientist and Program Director at the Survey Research Center at the Institute for Social Research at the University of Michigan. Since 1976 he has been a co-director of the Monitoring the Future project, an ongoing study of American youth. This study provides annual reports on trends in the use of psychoactive drugs, including alcohol, tobacco, and illicit drugs.

Jerald G. Bachman is a Program Director and Research Scientist at the Survey Research Center, Institute for Social Research, at the University of Michigan. He has directed a program of research on youth and social issues for more than 30 years. His current research interests focus on drug use and its correlates, and on the views of physicians and the public on end-of-life issues.

Lloyd D. Johnston is a Program Director and Research Scientist at the Survey Research Center, Institute for Social Research, at the University of Michigan. He is principal investigator on the ongoing national research project entitled Monitoring the Future. He has also been involved in the development of foreign and multinational studies of substance abuse.

Appendix A. Items Measuring Routine Activities: Monitoring the Future Questionnaire Form 2, Administered 1977 to 1986

The next questions ask about the kinds of things you might do. How often do you do each of the following?

(1) Never, (2) A few times a year, (3) Once or twice a month, (4) At least once a week, (5) Almost everyday

A02A. Watch TV

A02B. Go to movies

A02D. Ride around in a car (or motorcycle) just for fun

A02E. Participate in community affairs or volunteer work

A02F. Play a musical instrument or sing

A02G. Do creative writing

A02H. Actively participate in sports, athletics, or exercising

A02I. Do art or craft work

A02J. Work around the house, yard, garden, car, etc.

A02K. Get together with friends, informally

A02L. Go shopping or window-shopping

A02M. Spend at least an hour of leisure time alone

A02N. Read books, magazines, or newspaper

A02P. Go to parties or other social affairs

C25: During a typical week, on how many evenings do you go out for fun and recreation?

(1) Less than one, (2) One, (3) Two, (4) Three, (5) Four or five, (6) Six or seven

C26: On the average, how often do you go out with a date (or your spouse, if you are married)?

(1) Never, (2) Once a month or less, (3) 2 or 3 times a month, (4) Once a week, (5) 2 or 3 times a week, (6) Over 3 times a week

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