

SITUATIONAL AND ATTITUDINAL EXPLANATIONS OF POLICE BEHAVIOR: A THEORETICAL REAPPRAISAL AND EMPIRICAL ASSESSMENT

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This paper reappraises the value of situational and attitudinal variables as parts of a theory of police behavior. That situational factors affect officers' decisions to make arrests is well supported by empirical evidence; that officers' behavior is shaped by their attitudes and values is a common assumption even though it is supported only by weak empirical evidence. This analysis indicates that the theoretical utility of situational variables is limited for the most part to the arrest decision: Situational factors have modest effects on officers' choices among informal actions. Furthermore, the analysis shows that attitudinal variables fail to account for more than a very small part of the variation in behavior. A theoretical perspective on police behavior as administrative decisionmaking is consistent with these findings, and might redirect future research along more fruitful lines.

I. INTRODUCTION

The image of police as ministerial agents who mechanically enforce the law has given way to one that better captures what the police do and how they do it. Both academicians and police administrators count not only law enforcement but also order maintenance and service among the police functions (Wilson, 1968; also see Bittner, 1974), and they acknowledge that patrol officers have wide latitude in performing those functions (Goldstein, 1963, 1977). To better understand the bases upon which discretionary decisions are made, scholars have examined police officers' behavior in discretionary contexts such as contacts with juveniles (Piliavin and Briar, 1964; Werthman and Piliavin, 1967; Black and Reiss, 1970; Lundman *et al.*, 1978); with traffic law violators (Lundman, 1979; Fyfe, 1988); with complainants (Black, 1970; Pepinsky, 1976); and with parties to interpersonal disputes (Parnas, 1967; Berk and Loseke, 1980-81; Worden and Pollitz, 1984; Smith and Klein, 1984; Worden, 1984; Smith, 1987). These and other analyses (see, e.g.,

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Reiss, 1971; Muir, 1977) have clearly shown that policing is for the most part *extralegal*, for while officers (often) work within the constraints of the law, they seldom invoke the law in performing police work; informal action, with or without coercive threats, is commonplace, and hence the dimensions of police discretion are not delineated only by officers' authority to apply legal sanctions.

Research on the exercise of police discretion has for the most part adopted one of two approaches to explaining officers' behavior (see Sherman, 1980). One approach is to examine officers' actions in individual encounters with citizens to account for variation in behavior in terms of "situational" factors. Situational explanations hold that officers' behavior in police-citizen encounters is influenced by structural characteristics of the immediate situation: the nature of the problem, the attributes and actions of the citizens, and contextual variables. Research of this genre has led to the conclusion that officers' behavior is largely a response to situational cues (Berk and Loseke, 1980–81). The second approach is to examine the behavioral patterns of individual officers to explain variation in terms of officers' attitudes. Attitudinal explanations hold that officers develop distinctive "styles" of performing their duties, and that the development of their behavioral styles is shaped by their attitudes and values (see White, 1972; Muir, 1977; Broderick, 1977; Brown, 1981).

Much of this research has analyzed officers' decisions to take formal action and especially to make arrests. Most empirical tests of situational explanations have focused on this form of behavior, and they convincingly demonstrate that the arrest decision is influenced by these factors (see esp. Black, 1971; Lundman, 1974; Smith and Visser, 1981). But this focus on the arrest decision blurs the distinctions among other behavioral choices, and it impedes further theoretical progress. Some studies (e.g., Parnas, 1967) distinguish among categories of informal actions; they are usually rich in descriptive detail and hypothesis-generating insights but impoverished in rigorous analysis.

The purpose of this paper is to reappraise the value of situational and attitudinal explanations as parts of a theory of police behavior. It evaluates these explanations against a theoretical perspective, drawn largely from the literature on administrative decisionmaking, that implies that situational and attitudinal explanations can be expected to fall far short of accounting for officers' behavior. It also provides an empirical assessment of these explanations, drawing on observational and survey data to analyze a broad spectrum of police behavior in each of three domains of police activity: traffic enforcement, aggressive preventive patrol, and dispute resolution. The results of these analyses show that while situational factors have a significant effect on officers' decisions to make arrests, they have a rather modest effect on their choices among informal courses of action. The findings further indicate

that attitudinal variables account for a very small part of the variation in officers' behavior. The paper will thus show that there are both theoretical and empirical reasons to expect the explanatory power of situational and attitudinal variables to be quite limited. Finally, the paper discusses the implications of these findings for future research.

II. A THEORETICAL REAPPRAISAL

A. *Situational and Attitudinal Explanations of Police Behavior*

Situational explanations of police behavior are grounded in a sociological perspective on social control and the law that directs attention toward the impact of social structure on the mobilization of law (see Black, 1980: esp. chap. 1, 1–40). While the “quantity of law” can perhaps be conceived as a continuous variable (*ibid.*, pp. 209–217; also see Black, 1976), empirical research on police that has adopted this perspective has with rare exceptions analyzed formal actions—making arrests, taking crime reports, and issuing traffic citations—as discrete, dichotomous variables. Features of social structure, such as the social status of victims, complainants, and suspects, represent extra-legal criteria on the basis of which legal sanctions are applied or withheld (Sykes *et al.*, 1976).

An impressive body of research findings testifies to the influence of situational factors on police behavior. The likelihood of formal action is related to the severity of the offense, the visibility of the encounter (i.e., whether it transpires in a public or private setting, and whether bystanders are present), characteristics of the suspect (sex, race, age, social class, demeanor, and sobriety), characteristics of the victim (sex, race, and dispositional preference), and the relationship between the parties.¹ Although early bivariate analyses could not reveal whether these variables have independent effects on behavior,² more recent multivariate analyses demonstrate that many of these relationships hold even when other variables are controlled. These findings have thus identified theoretically important variables and underscored the discretionary character of policing.

Attitudinal explanations have been formulated and evaluated primarily through the construction of typologies of police officers (see White, 1972; Muir, 1977; Broderick, 1977; Brown, 1981; also see

¹ An exhaustive summary of these findings is neither possible nor necessary here. See Black (1970, 1971, 1980); Black and Reiss (1970); Reiss (1971); Lundman (1974, 1979); Friedrich (1977); Lundman *et al.*, (1978); Berk and Loseke (1980–81); Smith and Visser (1981); Ericson (1982); Smith and Klein (1984); Worden and Pollitz (1984); Worden (1984); and Smith (1987).

² Some evidence, for example, indicates that the relationship between suspect race and police behavior is spurious—that black suspects are more likely to be arrested because they are less likely to be deferential and not because they are black (Sykes and Clark, 1975). On the shortcomings of bivariate analyses more generally, see Sherman (1980: 70).

Talarico and Swanson, 1980). Each typology defines four types of police officers in terms of the valences of two attitudinal dimensions. Direct observation (and in one case, written responses to hypothetical scenarios) has provided evidence—albeit largely impressionistic—of a link between officers' attitudes and behavior.³ Muir (1977), for example, describes four types of officers—the professional, the reciprocator, the enforcer, and the avoider—and for each of four general kinds of situations, he also describes characteristic patterns of behavior exhibited by the respective types of officers.⁴ This research has placed less emphasis on the features of individual police-citizen encounters and more emphasis on the psychological traits with which individual officers enter any encounter. Although this work is less voluminous and less analytically rigorous than that on situational explanations, it has revealed attitudinal and behavioral heterogeneity among officers as well as systematic variation in behavior that appears as random variation in situational accounts.⁵

Attitudinal explanations seem compelling even in the absence of strong empirical evidence, given the intuitive connection between attitudes and behavior. To maintain that people act in ways that are inconsistent with their attitudes seems patently absurd. But a large body of social-psychological research has shown that people's attitudes are usually only weakly related to their behavior. Early analyses of attitude-behavior relationships revealed that behavior is often inconsistent with attitudes; numerous investigations have since sought to explain this inconsistency and to identify the (limited) conditions under which consistency holds. One of the most compelling and theoretically significant explanations for inconsistency is the impact on one's behavior of "situational pressures," such as social norms, the norms of reference groups,

³ Attitudinal explanations also implicitly underlie many analyses of the relationships between behavior and officers' characteristics, such as length of service, education, race, and gender (see Sherman, 1980: 71–76). But such studies offer support for attitudinal explanations only, if at all, with inferential leaps of faith; even if the hypothesized relationships are found to hold, it does not follow that attitudes are intervening variables.

⁴ While Muir (1977: 54) believes that "there are both logical connections and a factual correlation" between officers' attitudes and behavior, he forthrightly cautions readers to "remain skeptical."

⁵ Situational and attitudinal explanations need not—and should not—be seen as *competing* explanations; to the contrary, insofar as situational factors constrain but do not determine officers' behavior, it is plausible (and tempting) to attribute the "residual" variation in behavior to officers' attitudes and values (see, e.g., Smith and Klein, 1984). Moreover, theoretical progress could perhaps be made by formulating hypotheses about interactions between attitudes and situational factors; in particular, one might hypothesize that the effects of specific situational factors are more pronounced for officers who hold certain attitudes, or that the effects of certain attitudes are more pronounced in specific situations. See Blalock (1965), Wright (1976), and Hanushek and Jackson (1977) on testing hypotheses about interactive or conditional relationships; see Worden and Pollitz (1984) for an application to police. But also see the discussion below regarding the ambiguity of situational cues.

and the behavior of others; generally, attitude-behavior consistency is greater when these social forces are congruent with an individual's predispositions than when they conflict with one's attitudes.⁶

The effects of such forces on officers' behavior have not been completely overlooked in previous research; indeed, situational explanations emphasize the dynamics of police-citizen encounters as social situations. But both the formal and informal police organizations almost certainly represent more important reference groups for officers (Lipsky, 1980: 47–48, 76–80) and thus organizational demands—the expectations of superiors and of the work group—form what may be an important set of situational pressures that attenuate attitude-behavior relationships. Quotas for traffic tickets are but one example of such situational pressures: Some officers probably stop more motorists and write more tickets than they would if they were guided only by their own predispositions for traffic enforcement.

Situational and attitudinal explanations of police behavior are predicated on implicit or explicit presumptions that officers exercise almost complete autonomy in performing their jobs, and that their tasks are clearly defined and well understood. The stress on discretion and autonomy served to rectify the erstwhile view of day-to-day police work as tightly constrained enforcement of the law, but certainly a theory of police behavior should explicitly recognize that officers work within an organizational milieu. Moreover, a theory of police behavior must also reflect the ambiguity and uncertainty of the task environment in which officers work, where formal and informal rules and procedures are in many cases vague and may even conflict, characteristics of the incidents into which they intervene may be variously interpreted, causal connections between actions and outcomes may be unclear, and the objectives toward which they are expected to direct their efforts are stated in general terms (if at all) and may be inconsistent. Officers must interpret these features of the task environment as they choose their courses of action. This ambiguity and uncertainty, I shall argue, can be expected to attenuate the relationships between situational factors and officers' attitudes on the one hand and officers' behavior on the other. It may therefore be desirable to re-evaluate the theoretical perspective on which situational and attitudinal explanations rest.

⁶ See, e.g., DeFleur and Westie (1958); Warner and DeFleur (1969); Frideres *et al.*, (1971); Acock and DeFleur (1972); and Liska (1974b). For reviews of this literature, see Wicker (1969), Liska (1974a), and especially Shuman and Johnson (1976).

B. Police Behavior as Administrative Decisionmaking

Attitudinal and situational explanations can be comprehended by a more general theoretical perspective on administrative decisionmaking. Simon's (1976) description of "administrative man" is a useful starting point (also see Simon, 1955, 1956, 1979). Administrative man, according to Simon, engages in limited searches for courses of action that yield satisfactory outcomes; that is, he "satisfices." Furthermore, administrative man has only a limited capacity for processing and analyzing information; his rationality is bounded in that he "makes his choices using a simple picture of the situation that takes into account just a few of the factors that he regards as most relevant and crucial" (Simon, 1976: xxx). These simplified pictures serve as decision rules that can be applied repeatedly and thus obviate the treatment of every case *de novo*. This theoretical perspective is quite compatible with extant empirical findings on police behavior. Police officers satisfice in that they adopt rather modest objectives: to deter suppressible or "outside" crimes (Rubinstein, 1973: 339–340); to "handle" situations; and to maintain respect for police authority in the form of overt deference (see, e.g., Westley, 1970; Van Maanen, 1974). Officers choose courses of action based on a simplified view of the situation, or on a small set of situational cues. They are also guided to some degree by rules of thumb that are consistently applied, which is to say that they practice individual styles of policing.

According to Simon, decisionmaking can be understood—and explained—in terms of the premises for decisions: factual premises about the consequences of alternative actions, and value premises about the desirability of alternative sets of consequences. From this perspective, then, the theoretical problem is to identify officers' decision premises. In view of the large amount of variation in officers' behavior that is, as the empirical assessment will show, unexplained by situational and attitudinal variables, it follows that situational and attitudinal explanations fail to capture the premises for officers' decisions.

Situational factors as such are not premises for officers' decisions, because their meaning and implications for action must be interpreted by officers. Police-citizen encounters confront officers with both ambiguity and uncertainty. They are ambiguous in that the nature of the problems they pose can be defined in many ways and in that the objectives toward which officers work are not specified precisely; they are uncertain in that officers' actions bear an unknown relationship to outcomes (cf. March and Olsen, 1976; March, 1978, 1982). Each situation presents officers with a plethora of cues whose practical meanings are not self-evident. As a result, officers can subscribe to very different cognitive representations of the same event. Each officer extracts some meaning from (a limited number of) these cues, but the particular cues on which

officers focus and the meanings that they derive from them vary from officer to officer with, as the empirical assessment will also show, little or no correspondence to their attitudes (except perhaps with respect to the arrest decision). Furthermore, the causal structures that underlie the phenomena with which officers deal are only dimly understood, and thus the technology of policing is fraught with uncertainty. One might consequently observe variation in officers' choices among alternative courses of action even in situations with similar meaning for the officers; officers with the same objectives and similar values can quite reasonably choose different courses of action in the belief that they will achieve the same outcome. Therefore scholars must identify the decision rules that link the "objective" reality of police-citizen encounters to officers' choices among courses of action.

Furthermore, a theory of police behavior must incorporate organizational forces that shape some of the premises for officers' decisions and thereby diminish the impact of attitudes on behavior.⁷ Decision premises are influenced through both obtrusive means, including formal controls such as rules and procedures, and unobtrusive means, including training, socialization, and specialization (Simon, 1976; March and Simon, 1958). All of these influences on decision premises can of course be found in police organizations. Thick books of rules and regulations are commonplace, as are informal demands, such as those for "efficiency," which discourage compliance with the rule of law (Skolnick, 1975). Unobtrusive controls also are manipulated by administrators (Wilson, 1968), if only to a limited extent. Since the nature and intensity of administrative demands vary across departments (*ibid.*; Gardiner, 1969; Wilson and Boland, 1978) and even within departments among supervisors (Van Maanen, 1983), the theoretical problem is further complicated, but it can be ignored only by sacrificing a potentially significant degree of predictive accuracy. Unfortunately, empirical inquiry into the impact of formal organizational forces on police behavior has seldom been undertaken since Wilson's (1968) pathbreaking work (notable exceptions include Friedrich, 1977; Brown, 1981; and Smith, 1984).

The structural impediments to organizational control in police departments are commonly thought to leave a decisionmaking vac-

⁷ One need not subscribe to assumptions about satisficing and bounded rationality to incorporate organizational influences on behavior into a broader theoretical perspective on police behavior. An alternative perspective on administrative decisionmaking, known as the economic or "rational choice" approach, also emphasizes the impacts of organizational incentives and disincentives, making other very different assumptions about decisionmaking processes. For an application of this approach to public bureaucracies, see Knott and Miller (1987). For comparisons of the bounded rationality and rational choice approaches, see Moe (1984) and Bendor (1988). For a preliminary application of this approach to behavior in police agencies, see Gates and Worden (1989).

uum at the street level (Brown, 1981; also see Prottas, 1978). Since police administrators can effectively influence only the trivial aspects of police work, so this argument goes, the important decisions are based on officers' predispositions (Brown, 1981). This argument, however, might underestimate the breadth of officers' "zones of acceptance" (Simon, 1976: 12), or the range of formal and informal rules, guidelines, procedures, and the like that officers are willing to follow merely because it is "appropriate" to do so (March, 1982: 34–36). However, rules are ambiguous (*ibid.*) and subject to "negotiation" (Manning, 1977: 161–179) and thus the translation of organizational rules into decision premises is not straightforward.

The informal organization, and especially the police culture, may be an even more important source of decision premises for police officers. The police culture presumably stems from a set of assumptions about police work that is widely shared among officers, and it includes a "code" to which they are expected to adhere (Westley, 1970; Van Maanen, 1974; Manning, 1977, 1979, 1982, 1987; Brown, 1981; Reuss-Ianni, 1983). To the extent that officers internalize the code, the police culture shapes their attitudes; to the extent that officers abide by the code, the police culture influences their decision premises. But the code, like the situations to which it applies, is ambiguous; indeed, it holds that officers' actions shall not be second-guessed, because valid judgments can be made only with personal knowledge of the contingencies of any situation. This ambiguity allows for interpretations and applications of the culture's code that produce no necessary correspondence between attitudes and behavior (*cf.* Fielding, 1988). Furthermore, one can also find variations in the structure and content of informal subcultures, both within and across departments, that seem to have implications for officers' behavior (Mastrofski *et al.*, 1987); much of the research on the police culture has dwelt, however, on cultural elements that presumably transcend organizational boundaries, so that such inter- and intra-organizational variation is not well understood (but see Worden and Mastrofski, 1989).

This sketch of the theoretical landscape might seem too fuzzy in one respect and too detailed in another: too fuzzy to guide empirical research, yet too detailed to form the basis of a parsimonious theory. It might then seem that current theoretical approaches, which have yielded valuable insights, should not be abandoned. But an empirical assessment of situational and attitudinal explanations shows that they account for a small proportion of the variation in officers' behavior. Although it is not necessary to abandon current theoretical approaches, further development of a theory of police behavior might benefit from the application of an alternative approach that is described in the concluding section of this paper.

III. AN EMPIRICAL ASSESSMENT

The empirical assessment of situational and attitudinal explanations consists of analyses of police behavior in three domains of police activity: traffic enforcement, aggressive preventive patrol, and interpersonal disputes. These domains together occupy a large share of officers' working time (Whitaker, 1982), and numerous hypotheses connect their behavior within these domains to situational and attitudinal variables. Across these domains, these analyses examine two forms of pro-activity—traffic stops and suspicion stops—and two forms of dispositions (or what Bayley, 1986, calls "exit actions")—in traffic stops and in interpersonal disputes; these specific forms of behavior have different potentials for discretion at the street level (see Wilson, 1968: 95–138).

Officers typically engage in traffic law enforcement on their own initiative, and so they potentially have wide discretion. After deciding to stop a motorist suspected of violating the traffic laws, officers have several options: for some offenses they can take an offender into custody by making an arrest; for many infractions they can issue a traffic citation, which typically requires the offender to either appear in court and/or plead guilty and pay a fine; they can issue a written warning, which is a formal action, albeit one without serious consequences; they can warn the offender verbally; or they can take no action. The potential for discretionary choices notwithstanding, traffic law enforcement is subject to at least a modicum of departmental control. Expectations about the level of traffic law enforcement can be unambiguously defined, the "technology" of traffic law enforcement—identifying and apprehending violators—is fairly well developed, and failures to comply with official policy are difficult to conceal.

"Aggressive" patrol does not, at least by definition, entail brutality or abusiveness. It does entail one or more of a number of tactics intended to increase the probability that offenders will be apprehended or to create the illusion thereof, and thereby to deter criminals. One tactic that is commonly included within the rubric of aggressive patrol involves stopping suspicious people to conduct field interrogations. Making suspicion stops, like enforcing traffic laws, is an activity in which officers engage on their own initiative, and it is therefore an activity over which they may exercise wide discretion in determining who will and will not be stopped and interrogated. In contrast with stopping traffic law violators, however, the circumstances under which an officer should make a suspicion stop are considerably more difficult to define with precision. The definition of what is "suspicious" is more ambiguous than the definition of what constitutes a violation of the traffic laws (see, e.g., Skolnick, 1975: 46). Furthermore, since suspicious people are not as readily discovered as traffic law violators, supervisors can neither apply a uniform standard for such activity across

beats nor assume that officers who submit few field interrogation reports are simply not trying hard enough. To the extent that the ability of the police organization to affect behavior is impaired by the inherent problem of clarifying expectations and evaluating performance, one would expect to find correspondingly greater variation in officers' propensities to make suspicion stops than in their enforcement of traffic laws, *and* one might expect to find that officers' "aggressiveness" is more strongly influenced by their attitudes (see Brown, 1981: chap. 8, 221–245).

Police are called for assistance in connection with many kinds of interpersonal disputes. The disputants may be family members, lovers, friends, or neighbors; or they may be strangers, such as merchant and customer. The subjects of disputes include disturbances of some kind (such as a loud party), property ownership, and in many cases domestic relations. Some involve a degree of physical violence. Disputes are complex situations that require for their resolution a consideration of seemingly infinite contingencies including the following: What is the subject of the dispute? What is the relationship of the disputants? Is the dispute rooted in previous and more deeply seated conflicts, or is it a discrete episode? What do the disputants want of the police (e.g., to leave, to make an arrest)? What is the potential for violence? Is one or more of the disputants intoxicated? Because disputes are so complex, police administrators are hard-pressed to specify clearly the courses of action that officers should take in resolving disputes. In the language of organization theory, dispute resolution requires an "intensive" technology because the task environment is "heterogeneous" (see Thompson, 1967; Prottas, 1978). Moreover, the technology is for the most part grounded in intuition and experience rather than in a body of scientific knowledge. Administrators can formulate guidelines and specify in some detail what officers should *not* do (Brown, 1981), but it is difficult to devise formulas for dispute resolution. And even if preferred behavior could be described precisely in regulations, administrators probably could not effectively monitor compliance. Unless a case enters the criminal justice system, where it is reviewed by other officials, the nature of an officer's response is known only by the parties present. Since formal action is in many cases neither justified nor well advised, and even if justified or well advised seldom taken, police departments can only at great expense acquire information about officers' actions from any source other than the officers themselves. In view of the inability of police departments to prescribe behavior and to enforce compliance, one might expect, based on current theoretical views, that administrators would exercise little influence over how officers respond to disputes and that other factors, such as situational factors or officers' own beliefs about how to respond, would therefore have a significant effect on their behavior in such contexts.

The data for this analysis were collected as part of the Police Services Study (PSS), which included twenty-four police departments in three metropolitan areas (Rochester, New York; St. Louis, Missouri; and Tampa–St. Petersburg, Florida), concentrating on sixty neighborhoods served by those departments. Trained observers accompanied officers on patrol during samples of fifteen patrol shifts in each neighborhood. Information about police-citizen encounters in which the observed officers became involved was recorded in field notes and later coded on a standardized form; in many cases, a narrative account of the episode was also prepared. In addition to observation, a questionnaire was administered to a sample of officers in each department, including nearly all of those observed on patrol. While these data are not without their shortcomings, they afford an unusually good opportunity to test situational and attitudinal explanations of officers' behavior.⁸

⁸ The PSS was conducted by Elinor Ostrom, Roger B. Parks, and Gordon P. Whitaker, and funded by the National Science Foundation through grant GI43949. The data analyzed here were collected in 1977 for Phase II of the PSS. Information about the details of data collection can be obtained from the Workshop in Political Theory and Policy Analysis at Indiana University.

The departments studied range in size from only 13 officers to over 2,000; they serve municipalities whose populations range from 6,000 to 499,000. This sample is not random, but it is a rough cross-section of organizational arrangements and service conditions for urban policing in the United States. Within jurisdictions, the neighborhoods on which data collection was concentrated were selected with explicit reference to two criteria: the race and income of residents. The sample represents a cross-section of residential service conditions for each department. Several caveats are in order, however.

First, secondary analysis seldom allows for a close fit between theoretical constructs and operational definitions. Because these data were not collected for the express purpose of testing situational and attitudinal explanations of police behavior, the validity and reliability of the measures fall short of what could otherwise be expected.

Second, in-person observation provides information that would otherwise be unavailable or, at the very least, of questionable validity and/or reliability; neither, however, is it free of error. The most potentially serious problem is reactivity; officers might alter their behavior in the presence of an observer by not doing some things that they otherwise would do or by doing some things that they otherwise would not. This potential source of bias has been explored as far as possible using observers' estimates of officers' reactivity. (The findings reported here hold even when one excludes from the analyses those shifts on which the observers noted that, in their judgment, their presence affected the officers' behavior either throughout or for substantial proportions of the shifts.) Analyses based on observational data complement analyses based on other kinds of data, but they are neither conclusive nor by their nature without scientific value. (For an extended discussion concerning the collection of observational data for the PSS, see Caldwell, 1978.)

Third, the sample selection procedures of the PSS may be a source of bias. Observation was confined mostly to areas that were predominantly residential. No more than 25% of any neighborhood consisted of heavy industry, government, or commercial enterprises; most had no heavy industry and few commercial establishments. Such areas might offer fewer opportunities for officers to initiate certain kinds of encounters, such as those with traffic law violators or with suspicious people, and variation in pro-activity may thus be restricted. Furthermore, the PSS sample of shifts overrepresents the more active ones, during which officers have the least time to initiate encounters and are under the greatest pressure to expedite those in which they do become involved. (The sets of shifts [e.g., the Wednesday day shift, and the Friday

A. *Police Behavior*

1. **Pro-activity.** During the 900 patrol shifts observed for PSS, officers made 855 traffic stops, or roughly one stop per shift on average.⁹ On roughly half of the shifts observed, however, the officer made no traffic stops; two or more stops were made on only one quarter of all shifts. Table 1 reports the frequency distribution of traffic stops across the shifts for which officers were observed for at least four hours.¹⁰

Officers made 329 suspicion stops, including officer-initiated encounters with suspicious persons and suspected violators, and officer-initiated interventions into situations involving suspicious cir-

“graveyard” shift] selected for observation were as nearly as possible the same across neighborhoods.)

⁹ For each encounter, the observer could record up to 3 codes that were intended to identify the nature of the problem (e.g., noise disturbance, burglary, or moving violation). Traffic stops include encounters with operators whose vehicles lack functional equipment (such as brake lights or head lights), proper license plates, registration, or inspection; they also include encounters with motorists who are driving under the influence of alcohol (DUI) or who have committed a moving violation, such as exceeding the speed limit or making an illegal turn. They do *not* include encounters with citizens who are stopped because they appear “suspicious,” even if the stop is justified to the citizen with reference to a traffic infraction. Stops that concerned a suspicious person or circumstance *and*, at least ostensibly, a traffic law violation, have been excluded from the analysis of traffic enforcement. Suspicion stops are presumably motivated by concerns that do not prompt (and may even discourage) traffic stops (see Brown, 1981: 226–227), and they are the subject of a separate analysis. If, of course, the observed officer’s intentions were not clearly communicated to the observer, then the apparent reason for the stop—and the one coded in these data—was not the actual reason for the stop; thus, some of the stops included here might be better examined as suspicion stops, but they defy identification.

¹⁰ Observation during some shifts was unavoidably interrupted; unless the interruption occurred near the end of a shift, the observer was transferred to another unit, and, for the purposes of coding, a new “shift” was begun. Thus the PSS data include many shifts of less than 8 hours duration and a substantial number of less than 7 hours duration. Obviously, the longer officers were observed on a shift, *ceteris paribus*, the more likely they were to have been observed making a traffic stop. No traffic stop was made on any shift of less than 4 hours, and only 58 were made on the 140 shifts of less than 7 hours. Based on the assumption that the measure of pro-activity is increasingly unreliable as the time observed decreases, the analysis is restricted to shifts of 4 hours or more; 55 shifts are thereby excluded from the sample.

Even after *post hoc* inflation, the rate at which traffic stops were made may still seem rather low. Three observational studies of traffic law enforcement provide some information on the basis of which one can evaluate the level of activity in the PSS data. Lundman (1979) examined a medium-sized police department that imposed a quota of 2 traffic citations per shift, with which officers apparently complied; since they issued a citation in slightly less than half of the stops they made, it appears that the officers observed for Lundman’s study made 4 traffic stops per shift. But Ericson’s (1982: 79–80) study of a large Canadian municipal police force reports a rate that much more closely resembles that found in the PSS data. His observations cover 348 randomly selected shifts on which officers initiated 351 traffic encounters, or about 1 per shift. And Friedrich’s (1977: 249–251) analysis shows that on the 840 shifts observed for the Black-Reiss study, officers stopped 330 traffic law violators, or no more than 1 every 2.5 shifts (although the rates varied considerably across the 3 departments).

Table 1. Levels of Pro-Activity Across Shifts

Traffic Stops (per shift)	Shifts	Suspicion Stops (per shift)	Shifts
0	442	0	676
1	224	1	147
2	128	2	43
3	50	3	21
4	34	4	3
5	10	5	4
6	4		
7	1		
8	1		

cumstances. Officers made one or more suspicion stops on less than one quarter of the shifts observed for the PSS; two or more stops were made on only seventy-one, or 7.5 percent of all shifts. Table 1 reports the frequency distribution of suspicion stops across the shifts of four or more hours. On average, officers made one suspicion stop every three shifts.¹¹

2. Dispositions. Officers' encounters with suspected traffic law violators are "low visibility" events; no one expects officers to take formal action in every case (Goldstein, 1960; Goldstein, 1963),¹² and indeed often they do not. Table 2 displays the number of traffic stops in which officers took each of the actions listed. Since more than one action could be taken against a single violator, the table also shows the number of stops in which the action was the most serious one taken, assuming that seriousness decreases as one descends the list. Dispositions are operationalized in terms of the latter set of mutually exclusive categories. In about half of the stops the officers took no action more serious

¹¹ Only 1 suspicion stop was made during the 55 shifts of less than 4 hours. Officers observed for the PSS were somewhat less aggressive in stopping suspicious people than were the officers observed by Ericson (1982: 79–80), who reports that during the 348 shifts he observed, officers made 141 "citizen contacts" involving suspicious persons or circumstances, and an additional 27 concerning possible criminal activity; they therefore made 0.48 suspicion stops per shift (or 0.41 per shift if one excludes the latter 27 contacts). As with pro-activity in traffic law enforcement, this difference—and variation among the departments studied for the PSS—could be attributed to a number of factors internal and external to the departments.

¹² An exception to this rule is an encounter with a traffic law violator for whom an arrest warrant has been issued in connection with some other, often more serious offense. In these data, 6 persons stopped for traffic law violations (but not as suspicious persons) were arrested on warrants, and those cases have been excluded from the analysis. Two other encounters, each of which involved 4 suspects and another police unit (but for which no narrative was available), have also been excluded inasmuch as they represent a phenomenon quite different from the routine traffic stop.

Table 2. Dispositions in Traffic Stops and Disputes

Action	Traffic Stops				Action	Disputes			
	Total ^a		Most Serious			Original Categories		Collapsed Categories	
	Frequency	Percent	Frequency	Percent		Frequency	Percent	Frequency	Percent
Arrest	28	3.3	28	3.3	None	36	14.2	36	14.2
Ticket	323	38.1	303	35.8	Mediate only	13	5.1	18	7.1
Written warning	90	10.6	81	9.6	Mediate/counsel	5	2.0	—	—
Verbal warning	348	41.1	319	37.7	Separate only	12	4.7	15	5.9
None	116	13.7	116	13.7	Separate/counsel	3	1.2	—	—
					Coerce only	50 ^b	19.7	31 ^c	12.2
					Counsel only	21	8.3	21	8.3
					Mediate/separate	7	2.8	12	4.7
					Mediate/separate/counsel	5	2.0	—	—
					Mediate/coerce	15	5.9	15	5.9
					Separate/coerce	11	4.3	19 ^c	7.5
					Separate/coerce/counsel	9 ^b	3.5	—	—
					Coerce/counsel	50 ^b	19.7	41 ^c	16.1
					Mediate/separate/coerce	7	2.8	16 ^c	6.3
					Mediate/separate/coerce/counsel	10 ^b	3.9	—	—
					Arrest	—	—	30	11.8

^a more than one disposition can result

^b includes arrests

^c excludes arrests

than giving the violator a verbal warning, and in an additional 10 percent the officers did nothing more serious than issue a written warning. In most of the remaining stops, the officers issued a ticket.

Officers observed for the Police Services Study became involved in 254 disputes that involved two or more disputants.¹³ The range of potential police responses to interpersonal disputes is extremely wide, extending from inaction to the use of deadly force. In the PSS sample, officers' actions were only rarely more extreme than arresting one or more of the parties; they used physical force in just five cases. Even so, officers' options are limited primarily by their own ingenuity, and several kinds of efforts to restore order may be made in a single encounter as the officer adapts to unfolding circumstances. Efforts to abstract conceptual and operational definitions of behavior from such a dynamic and complicated phenomenon may thus so distort reality that analytical results are meaningless. Indeed, the problem of operationalizing this variable is no doubt among the reasons that previous quantitative analyses have focused on arrest, which is relatively straightforward conceptually and operationally and which lends itself to the analysis of archival as well as observational data;¹⁴ the problem of operationalization must be given careful scrutiny.

On the basis of observation and previous descriptive research, one can distinguish among at least four approaches to dispute resolution adopted by police. One approach is mediation, which may involve clarifying the terms of the disagreement, identifying potential areas of compromise, and, if successful, finding a solution to which both (or all) of the disputants are agreeable. A second ap-

¹³ PSS observers recorded information on 501 dispute-related incidents, but many of them (181) did not involve face-to-face conflict; that is, one of the disputants—often an alleged offender—was not present. Encounters with a single disputant are qualitatively different situations that present officers with a different (i.e., more restricted) range of options; indeed, some scholars (e.g., Black, 1980: 119) would not characterize these situations as disputes. This analysis examines police intervention into disputes in which at least two parties are present. The roles of the citizen participants were determined principally on the basis of data coded by observers, supplemented in some cases by the narrative accounts. Each dispute involves at least 1 suspect as well as a victim, a complainant, or another suspect. (The narratives show that in many cases both disputants were coded as suspects.)

Furthermore, 66 incidents in which the observed officer was a "back-up" are excluded from analysis. Occupational norms accord to back-ups a decidedly secondary role, and one may thus expect that officers assigned (or taking) the back-up role would not behave as they would in the role of primary officer—that they would be less likely to act, that their behavior would be less sensitive to situational cues, and that in deferring to the primary officer, they would suspend their own attitudes about how to respond. Thus the inclusion of such cases would be likely to dilute the strength of attitude-behavior relationships.

¹⁴ This is not to deny the theoretical or practical utility of analyzing arrests. Studies of the arrest decision in *domestic* disputes would seem to be especially important in view of Sherman and Berk's (1984) findings that an arrest is a deterrent to further assaults.

proach is separation. However, separating the disputants by persuading one of the parties to leave for a time does not necessarily effect a lasting solution to the dispute. It does at least *interrupt* the dispute, which sharply reduces the potential for immediate violence and, inasmuch as the parties are often agitated, may be conducive to later reconciliation. A third approach is coercion, which entails the potential or actual use of an officer's legal authority. An officer may give directions and issue commands, inducing compliance by implicitly or explicitly threatening to invoke the law or to use physical force, or an officer may make an arrest and summarily end the encounter. A fourth possibility would be to counsel one of the parties, providing information about filing charges, a referral to another agency, or simply reassurance. There are no doubt a virtually infinite number of variations on any of these approaches, but they would seem to capture important differences among police responses (cf. Bayley, 1986).

Previous efforts to classify police responses to disputes describe similar categories of behavior. Black (1980: 130–132) describes four “styles” of social control—penal, conciliatory, therapeutic, and compensatory—to which he adds combinations of these basic styles. Worden (1984) constructs a four-fold typology of responses based on the behavioral dimensions of control and support (Cumming *et al.*, 1965). But four categories of police responses to disputes might not be adequate for testing situational and attitudinal explanations. Officers are not limited to only one or even two courses of action in any one encounter; any combination of two, three, or even all four types are conceivable, and thus behavioral categories that consist of a single action are not mutually exclusive. Fourteen permutations of these four actions can be logically derived. To these one should add another: inaction.¹⁵ Both Black and Worden recognize this complexity (both frameworks provide for combinations), but both seek to impose some measure of conceptual simplicity for analytic purposes.¹⁶ A taxonomy with so many categories is cumbersome to be sure, but it has the virtue of making few assumptions about the theoretical similarity of different actions.

Operationalizing these categories with the information collected by the Police Services Study, one can examine their relative frequencies. PSS observers recorded on standardized forms whether officers did the following: helped to settle an argument (mediated); persuaded one of the disputants to leave the scene

¹⁵ Black (1980: 129–130) notes that in about 1 in 20 cases, the police refuse to act at all, usually claiming that the situation is a civil matter and not police business.

¹⁶ Black (1980: 131–132) maintains that in each encounter a *dominant* style of control can be identified for the purpose of analysis. But by characterizing responses in terms of a dominant style, information is discarded and important differences among the responses—and in the causal structures that underlie the responses—may be obscured.

(separated); lectured, threatened, or arrested one or more of the disputants (coerced); or provided information, made a referral, or reassured (counseled).¹⁷ As Table 2 shows, multiple actions were often taken in a single encounter. Some response types are fairly common, while others are adopted only rarely. Several of the responses are so infrequent that, for analytical purposes, the number of categories can be reduced; the “collapsed” categories are also shown in Table 2.¹⁸ Upon this set of categories one more—arrest—is imposed, because arrest is in some respects unique and because it has received so much attention in previous research.

B. Situational and Attitudinal Hypotheses

1. Situational Factors. The category of situational factors usually consists of features of a police-citizen encounter. For an analysis of pro-activity, the “situation” encompasses characteristics of an officer’s beat and shift that structure the opportunities to make traffic stops and suspicion stops. Such factors are of little theoretical interest, but they are potentially important as controls, lest we mistake the effects of officers’ assignments for that of their choices of pro-active styles.

The number of opportunities to make traffic stops is a function of the volume of traffic, the behavioral propensities of motorists, and the volume of other demands on officers’ time. One would thus expect that traffic law violations would be most numerous in areas that contain major thoroughfares and that are traversed by the least conscientious drivers, and at times when people are normally in transit; thus officers’ opportunities would systematically vary both spatially—across beats—and chronologically—across shifts.¹⁹ Opportunities to make traffic stops depend

¹⁷ In the 36 encounters in the “no action” category, officers typically asked for information and nothing else (so far as the coded data indicate).

The coercive response warrants a closer inspection. In 91 encounters the officer made a threat of some kind, most often a threat to make an arrest. Officers lectured 1 or both of the disputants in 120 cases. Arrests were made in 30 encounters, or 12 percent of the total. This figure is quite similar to those reported in other analyses of police behavior. Black (1980: 133) reports that one of the disputants was arrested in 49, or 23 percent, of the 213 cases handled in the penal style; of his total sample of 304 cases, then, an arrest was made in 16 percent. Also see Berk and Loseke (1980–81: 332).

One should note that while these data are far richer than the information contained in official police reports, they nevertheless omit much of the subtlety and nuance of behavior. All lectures are not equally stern, all threats are not equally menacing, and all information is not equally detailed and helpful. These may be important differences in behavior that are not reflected in these data. These data do, however, enable one to distinguish among the broad categories described above.

¹⁸ Whatever distortion is thereby introduced is probably justified in terms of parsimony. Each category that contained fewer than 10 cases was combined with another. And because mediation, separation, and coercion are more prominent than counseling in hypotheses that can be derived from previous inquiry, only categories that include counseling have been combined with others.

¹⁹ The PSS made no record of the traffic volume in each of its study

also on the amount of officers' discretionary time, or the time uncommitted to assigned tasks. At the extreme, officers who have little discretionary time because they are occupied with calls for service and other responsibilities can make few traffic stops, even if they observe many violations and are inclined to stop the violators.²⁰ In the PSS data, roughly two thirds of the average eight-hour shift, or five and one half hours, was discretionary; on a few shifts less than one fifth of the time, and on several nearly all of it, was uncommitted.

Like traffic law violators, suspicious persons and/or circumstances are not likely to be distributed randomly across time and space, and neither, therefore, are suspicion stops likely to be randomly distributed across shifts and beats. Obviously, high-crime areas are the sites of more criminal—and hence suspicious—activity than low-crime areas are, and for this reason they are more likely to attract officers' attention.²¹ Furthermore, much of the ac-

neighborhoods; neither is a measure of motorists' law-abidingness available in these (or any other) data. Thus this analysis includes a dummy variable, based on information about road networks and use, that indicates whether there is a major artery in each neighborhood. The descriptions on which this measure is based are vague and unsystematic for this purpose, but they provide some indication, however rough, of traffic volume in each neighborhood.

²⁰ Ericson (1982: 84) maintains that traffic and other pro-active work is a "residual activity—what the officer does when he has nothing else to occupy him." Brown's (1981: 225–237) analysis certainly suggests that this is not true for all officers, but the converse is true; officers need at least a modicum of discretionary time to engage in traffic law enforcement. However, the amount of discretionary time is not completely beyond the influence of the officer. Officers who are eager to work the street may dispose of calls much more quickly than others do. Thus discretionary time may be to some unknown extent a function of officers' attitudes. To estimate the parameters of this function, one would need either to randomize or to otherwise control for the nature of officers' assignments, since some are intrinsically more time-consuming than others. This, however, is beyond the scope of the present inquiry.

²¹ One means of distinguishing between high-crime and low-crime neighborhoods is to rely on officers' own perceptions of the crime problems in their respective beats. All officers were asked about the respective probabilities that a citizen in their assigned areas would be robbed, burglarized, or vandalized. Officers characterized the probabilities as "very likely," "somewhat likely," or "not at all likely." Two of these measures—those concerning robbery and burglary—bear the expected, albeit a weak, relationship to aggressiveness.

The PSS surveyed samples of the residents of each neighborhood, inquiring about experiences with and evaluations of local police. The survey instrument included items concerning victimizations—up to 5 for each respondent—that occurred during the preceding year. These data could be used to calculate estimates of the rates of neighborhood victimization and of reported crime. Unfortunately, these data provide biased estimates of crime rates, and the bias is systematically related to variables of interest here. Because the samples included only neighborhood residents, crimes against non-residents and commercial establishments were not counted. Although none of the neighborhoods is more than 25% commercial, they nevertheless vary in this respect. The survey data thus underestimate crime the most for precisely those neighborhoods in which officers might be expected to make the most suspicion stops. Much of the criminal activity, such as robberies, burglaries, motor vehicle thefts, and thefts from motor vehicles, that is the object of police concern takes place in commercial areas populated by non-resident customers and employees and res-

tivity that officers consider repressible and for which they therefore feel responsible, takes place after business hours and under cover of darkness. One would expect, then, that levels of aggressiveness, at least in the form of suspicion stops, would vary systematically across beats and within beats across times of the day. One would also expect aggressiveness to be greatest on shifts during which officers have the largest amount of free time. And because many, although certainly not all, suspicion stops are of motorists, one might expect to see a disproportionate number of such stops made in areas with a large volume of vehicular traffic.

Previous research indicates that officers' behavior in police-citizen encounters depends to some degree on the seriousness of the problem (Black, 1970, 1971; Friedrich, 1977; Smith and Visser, 1981): in traffic stops, on the gravity of the violation (Lundman, 1979; Fyfe, 1988: 15), and in disputes, on the severity of the conflict (Black, 1980: 180–185). Six kinds of traffic law violations are distinguished in the PSS data: driving under the influence (DUI); speeding; other moving violations (e.g., illegal turns); improper license plates or registration; equipment or inspection violations; and violation of local ordinances. In some other cases motorists were stopped for only routine checks. The data also indicate which cases involved a car chase in which the driver attempted to elude the officer. Moving violations other than speeding and DUI are the most common reasons for traffic stops, although nearly as many stops were for either improper license plates or equipment violations. Routine checks as well as stops for DUI were infrequent.

Most of the disputes were characterized by observers according to coding instructions as either: (1) an argument, or "any verbal disagreement that stops short of physical violence"; (2) a fight, or "any disagreement that includes violent physical contact"; (3) an assault, or "the physical attack by one person upon another not accompanied by the use of a weapon"; or (4) an aggravated assault, or a "physical attack by one person upon another accompanied by the use of a weapon or other means likely to produce death or serious bodily harm." Some additional cases were coded as landlord-tenant disputes. Over two thirds of the disputes in the PSS sample were no more serious than arguments; the remainder involved physical violence of some sort.

Previous research suggests that officers' behavior in police-cit-

ident businesses. If suspicion stops are made disproportionately in commercial areas, then neighborhoods that are proportionally the most commercial would be the sites of more suspicion stops than the underestimated crime rates would lead one to suppose.

Thus officers' perceptions are used as the best available indicators of this subset of situational factors. In view of the subjective element in each of these indicators, however, the theoretical status of these variables is somewhat ambiguous; one could plausibly argue that they are better conceived as attitudinal rather than situational variables.

izen encounters is also influenced by the visibility of the encounter (Lundman, 1974; Friedrich, 1977; Smith and Visser, 1981). Since traffic stops rarely transpire in any but a public setting, visibility varies principally in terms of who, if anyone, besides the principals is present. By contrast, many of the disputes to which officers are summoned take place in private houses or apartments. Disputes that transpire in public may be more likely to prompt a coercive response (Berk and Loseke, 1980–81; Smith, 1987), partly because they may have implications for uninvolved parties (if, for example, they disturb the peace). Furthermore, coercive action may be more likely insofar as officers feel that their legal authority is more legitimate in public rather than private settings.²² Officers might for the same reason be more likely to separate the disputants by persuading one of them to leave when the dispute is in public. Some research has found that the presence of bystanders, which represents a somewhat different facet of visibility, affects the severity of officers' treatment of suspects (Friedrich, 1977; Smith and Visser, 1981). In addition, the presence of other officers appears to make arrests less likely, perhaps because officers are less likely to rely on their personal authority and more likely to rely on their formal authority when they are alone (Friedrich, 1977).

Suspects' attributes are likely to affect dispositions in both traffic stops and disputes. Suspects who are male, black, lower class, young, antagonistic, and under the influence of alcohol are more vulnerable to formal action (Black, 1971; Lundman, 1974, 1979; Friedrich, 1977; Smith and Visser, 1981; Ericson, 1982; Smith and Klein, 1984; Smith, 1987), although many of these findings have not been consistently replicated. In disputes, furthermore, officers are more likely to make an arrest if the victim is male, white, requests that an arrest be made, signs a complaint, and alleges violence (Berk and Loseke, 1980–81; Worden and Pollitz, 1984; Smith and Klein, 1984; Smith, 1987); also, the likelihood of arrest is greater if the officer has some prior knowledge of the dispute, if one or both of the disputants is armed, and if the disputants are strangers or merely friends rather than intimately related—that is, married or living together (Black, 1980; Smith and Klein, 1984; Smith, 1987). Curiously, however, previous findings indicate that the likelihood of arrest is unaffected by whether one or more of the disputants has been injured (Berk and Loseke,

²² As Reiss (1971) has observed, citizens' opinions about the legitimacy of officers' intervention in an event often depend on whether police intervention was initiated by a citizen or by the police. But officers typically intervene in disputes at the behest of a citizen and only rarely on their own initiative. Of the 254 disputes analyzed here, the observed officer intervened in response to a citizen's request (usually relayed by a dispatcher) in all but 14. Nevertheless, *officers* may feel that their authority is more legitimate in public spaces.

1980–81; Worden and Pollitz, 1984; Smith and Klein, 1984; Smith, 1987; but for an exception, see Waaland and Keeley, 1985).

2. Officers' Attitudes. Officers' occupational attitudes might predispose them toward one "style" of policing rather than another. For example, they may choose to be more or less pro-active; or they may lean toward formal or informal dispositions, or toward one particular informal disposition rather than another. This assessment examines six attitudes that on the basis of previous research could be expected to influence officers' behavior and that can be measured using PSS data. Since the nature of these attitudinal dimensions and their hypothetical effects on behavior have been the subject of few studies, they are discussed in some detail here. Information about the construction of attitude scales can be found in the Appendix; see Worden (1986: chap. 4, 123–160) for a detailed treatment of measurement issues and univariate analyses. Bivariate analyses (not presented here) reveal very weak relationships between officers' attitudes and their behavior.

a. Role Orientations. Role orientations consist of officers' conceptions of the proper and legitimate scope of police business. Some officers believe that the police role is defined wholly by the mandate to fight crime and enforce the law; they believe in the utility of an aggressive style of patrol, and they regard order maintenance and service tasks with distaste. Other officers acknowledge a broader role for the police, even though they accord primacy to the law enforcement function. Still others attach no higher and perhaps lower priority to law enforcement than they do to other functions, such as order maintenance or service; they conceive their role as one of helping people, and they see themselves as a positive rather than a negative force in people's lives (see White, 1972; Broderick, 1977; Brown, 1981: 223–237).

Brown's (1981) analysis suggests that role orientations have a substantial effect on patrol aggressiveness: Officers with a narrow role orientation that emphasizes the enforcement function are more aggressive in stopping suspicious people and in investigating suspicious circumstances than are those with a broader conception of policing. Furthermore, officers with a narrow conception of the police role might be expected to deal with disputes either punitively or not at all. Because they draw the boundaries of their jobs around the law enforcement function, minor disputes fall outside of their definition of police responsibilities, and more serious disputes are police business only insofar as they constitute crimes. Officers with narrow role orientations may thus be more likely to make an arrest or to issue threats; alternatively, they may do virtually nothing, claiming that they have no authority in such circumstances (see, e.g., *ibid.*, pp. 228, 270). They would seem unlikely to mediate, since a conciliatory approach may be viewed as both inappropriate and a waste of time. Because they consider dis-

pute resolution to be a legitimate police function in its own right, officers with broader role orientations might be more likely than others to adopt noncoercive (and time-consuming) strategies, resorting to coercive measures only if other approaches fail.

b. Legal Restrictions. The stereotypical police officer chafes under due process provisions in the single-minded pursuit of criminal offenders. This officer bitterly resents legal and departmental restrictions concerning search and seizure, interrogation, and the use of force. Relevant psychometric data are scarce, so that it is difficult to assess rigorously the extent to which police officers fit this stereotypic mold, but several studies (White, 1972; Broderick, 1977; Brown, 1981) suggest that while some officers resent legal restrictions on police practices and are willing to violate them, other officers are willing to work within such restrictions and do not even feel unduly constrained by them.

Aggressive patrol is subject to constitutional limits: Officers must formally have reasonable cause to stop a citizen and conduct a field interrogation. Brown (1981: 162) observes that many officers ignore this requirement in practice, fabricating reasonable cause after the fact only if it is necessary to do so (i.e., if it turns out that the citizen who was stopped is an offender). But other officers refrain from stopping citizens without compelling reasons. One might suppose, then, that officers who view legal restrictions as a hindrance rather than as a legitimate constraint would be more likely to ignore them and thus to make more suspicion stops.

c. Citizen Respect and Cooperation. Many officers believe that the police are held in low regard by the general public, and some maintain that the public is uncooperative and even hostile. One might hypothesize that officers' perceptions are shaped by a more general and deeply rooted view of human nature, or what Muir (1977) calls perspective: Officers with a cynical outlook may be disinclined to believe that citizens are respectful and cooperative. The PSS questionnaire data include items about citizen respect for and cooperation with police. We can examine the independent effects of these two attitudes because they are only modestly associated ($r = .22$).

In general, one would expect officers to tailor their behavior to the anticipated behavior of those with whom they become (or might become) involved. In particular, officers who believe that citizens fail to accord police the respect they are due, and/or that citizens are hostile and even abusive to police, might be especially reluctant to stop traffic law violators because they either find such encounters exceedingly unpleasant or fear that an irate motorist might file a complaint. Alternatively, officers who believe that citizens are disrespectful and hostile might be especially energetic about enforcing traffic laws by both stopping offenders and issuing citations and thereby punishing an unappreciative citizenry. One can also formulate, a priori, contradictory expectations about the

effect of this attitude on aggressiveness. On the one hand, assuming that it is possible to make suspicion stops without aggravating the citizenry (see Brown, 1981: 163), one might expect that officers with positive attitudes would have fewer qualms about interacting with citizens and would therefore be more pro-active than officers with negative attitudes. On the other hand, if officers with negative attitudes are more cynical than officers with positive attitudes, then the former may subscribe to a more inclusive definition of suspicious activity and thus make more suspicion stops.

In disputes, officers who believe (correctly or not) that citizens are disrespectful or hostile might be more inclined to rely on their coercive authority rather than on their personal authority, that is, to adopt coercive responses rather than mediating or persuading one of the disputants to leave. And insofar as their attitudes are rooted in their outlooks on human nature, they may be predisposed to interpret events in terms of assigning guilt and identifying wrongdoers, and to penalize the parties so identified. Officers who believe that citizens are respectful may be more willing to assume a cooperative rather than an adversarial posture vis-à-vis citizens. They may thus be more likely to mediate or perhaps to counsel (e.g., by offering reassurance), and to the extent that their attitudes toward citizens are colored by what Muir (1977: 178–181) calls a “tragic perspective” on human nature, be more likely to seek informal resolutions, using their legal authority only as a last resort. Officers who believe that citizens do not cooperate with the police, for example, by refusing to press charges or to testify in court, perceive a disincentive in taking legal action; while an arrest may temporarily restore order, prosecution often depends on the cooperation of victims and/or witnesses. Legal action may be a more attractive option to officers who believe that citizens are likely to follow through on an arrest.

d. Legal Institutions. If the cooperation of citizens is necessary for court action, so too is the cooperation of legal institutions. Many officers, however, believe that legal institutions are uncooperative and unsupportive. They see the courts as “soft” on offenders and out of touch with the reality of the street. Officers who believe that prosecutors and judges do not support them may thus be less likely to take legal action, since in their eyes an arrest is likely to be of little consequence. The failure of other actors in the justice system to follow through on criminal proceedings initiated against abusive spouses, for example, is sometimes offered as an explanation for officers’ reluctance to make arrests in domestic cases. One might therefore expect that, in disputes, officers’ attitudes toward legal institutions are directly related to the likelihood of legal action and inversely related to the likelihood of informal action.

Officers’ attitudes toward legal institutions could also be expected to affect pro-activity. Officers who believe that they are

supported by neither courts nor prosecutors may be unwilling to make suspicion stops without demonstrable cause, since constitutionally questionable cases might be dismissed, and officers may even be made to look incompetent and foolish in court. Officers who believe that legal institutions are supportive of police might be more willing to make a stop that is legally uncertain (or that may be difficult to justify *post hoc*). Furthermore, attitudes toward legal institutions may also affect traffic law enforcement. Gardiner (1969: 67–68) found that the police in one city issued more citations than did those in another partly because the court in the former did not require an officer to appear in court until after a motorist had pleaded not guilty, and not when the case was first called. Such cooperation does not by itself encourage enforcement, but it does not discourage it; officers who view the courts as uncooperative may be less likely to stop and/or to cite traffic law violators.

e. Selective Enforcement. Brown (1981) suggests that officers can be distinguished in terms of their “selectivity,” or their attitudes about selective enforcement. Selectivity refers to a predisposition to array criminal offenses along a scale of priorities and to define a point on that scale below which laws are too unimportant to enforce.²³ Nonselective officers believe that all laws should be enforced with more or less equal vigor. One can plausibly hypothesize that officers’ attitudes toward selective enforcement influence both pro-activity and disposition in traffic enforcement; that is, that nonselective officers make more traffic stops, regardless of departmental quotas or informal pressures against “rate busting,” and that they more frequently issue tickets to violators. One could also hypothesize that officers’ selectivity influences their responses to disputes: Officers who believe that they should be selective in enforcing the law might be expected seldom to invoke the law in resolving disputes and instead to avail themselves of informal methods; officers who are non-selective might be expected to make arrests more frequently and to adopt extra-legal strategies less frequently.

²³ One might hypothesize that, in general, officers who are selective tend to ignore certain classes of violations, to seldom intervene in such cases on their own initiative, and to expend little effort in disposing of them. But predicting *which* classes of violations they will so ignore requires either additional information or assumptions about their priorities. Some officers who are selective ignore misdemeanor offenses; others neglect vice offenses; still others find virtually no violation so intrinsically serious that it is worthy of their attention (see Brown, 1981: 223–237). Brown defined and measured selectivity in terms of officers’ attitudes toward such minor violations as drunkenness, traffic offenses, and the possession of small amounts of marijuana; he thereby assumed that the enforcement priorities of selective officers are similar in at least these respects. This assumption is almost certainly an oversimplification, but the PSS data do not enable one to specify officers’ priorities.

C. Analysis

1. **Pro-Activity.** Pro-activity is measured as a simple count in each of the two domains of police work: the number of traffic stops and the number of suspicion stops made by the observed officer on each shift. The most straightforward approach to testing the above hypotheses is to estimate the parameters of a regression equation. OLS estimates of those coefficients are reported in Table 3.²⁴

a. *Traffic Stops.* Not surprisingly, officers' pro-activity in traffic enforcement is partially a function of the volume of traffic in their assigned areas, the time of day during which their shifts occur, and the amount of free time they have. The amount of discretionary time (which is measured in minutes) has by far the largest effect on the number of traffic stops; according to this estimate, officers make one additional traffic stop during each additional four-hour block of discretionary time. Fewer traffic stops are made on the "graveyard" shifts (which begin between 10 P.M. and midnight) than on other shifts, other variables—including discretionary time—being equal. Officers also make more traffic stops if they are assigned to areas with heavy traffic, that is, neighborhoods with at least one major artery; specifically, they make one additional stop every four shifts.

Compared with these factors, officers' attitudes have a rather small influence on pro-activity in traffic enforcement. The attitude that one would expect to have the most substantial effect on pro-activity—officers' attitudes toward selective enforcement—has no apparent effect at all; the sign of the coefficient indicates that selective officers are more rather than less pro-active, although the effect is statistically insignificant. The effects of two attitudes achieve statistical significance.²⁵ Officers who believe that citizens are respectful are more pro-active than are those who believe that citizens are disrespectful and/or abusive. Likewise, officers who believe that police are supported by the courts and by prosecutors are more pro-active than are those who have less regard for these institutional actors. But while both of these coefficients are statistically significant, neither is large in magnitude. Moreover, these variables have little overall explanatory power; situational and attitudinal variables together account for less than 10 percent of the variation in traffic stops.²⁶

²⁴ Since each measure of pro-activity is truncated at and skewed toward zero, OLS results could be biased. Tobit analysis yields similar results.

²⁵ As hypothesized, the estimated effects of the other attitudes are of negligible magnitude and statistically insignificant, according to the results of a separate regression analysis.

²⁶ Officers' attitudes might be expected to interact with situational factors: for example, nonselective officers would make more stops than selective officers when they have large amounts of discretionary time. However, no in-

Table 3. OLS Regression of Traffic Stops and Suspicion Stops on Situational and Attitudinal Variables^a

Variable	Traffic Stops	Suspicion Stops
Intercept	-.195	-.894
Situational factors		
Time observed	-.001 (-.045)	.000 (.014)
Discretionary time	.004* (.262)	.002* (.171)
Graveyard shift	-.404* (-.132)	.532* (.278)
Evening shift	—	.155* (.097)
Traffic artery	.195* (.076)	.030 (.019)
Perceived likelihood of		
Robbery	—	-.024 (-.021)
Burglary	—	-.069*** (-.054)
Vandalism	—	-.019 (-.016)
Officers' attitudes		
Role orientation	—	.065* (.089)
Citizen respect	.065** (.061)	.025 (.037)
Legal institutions	.043* (.059)	.009 (.019)
Legal restrictions	—	.023*** (.047)
Selective enforcement	-.083 (-.045)	—
<i>R</i> ²	.097	.116
<i>N</i>	810	759

^a Entries are unstandardized regression coefficients, with standardized coefficients in parentheses.

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

** $p < .10$, two-tailed test

*** $p < .10$, one-tailed test

teractions between officers' attitudes and their opportunities to make traffic stops (i.e., discretionary time and the volume of traffic) are significant.

Somewhat greater explanatory power can be achieved by including officers' length of service, race, gender, and educational background, which might capture some of the variation in unmeasured attitudes (but cf. n. 3 above). Female officers and more experienced officers make fewer traffic stops on average ($b = -.44$ and $-.04$, respectively), and the differences are

b. Suspicion Stops. The number of suspicion stops that officers make, or their aggressiveness, is also influenced by situational factors. Again, discretionary time affects pro-activity: Officers make one additional suspicion stop during each additional eight-hour block of discretionary time. Furthermore, pro-activity varies systematically across times of the day and, presumably, with temporal variation in the level of criminal activity: Officers are more pro-active during evening shifts than they are during day shifts, and they are even more pro-active during night shifts. Geographic variation in crime levels, insofar as it is reflected in officers' perceptions, apparently bears a much weaker relationship to pro-activity.

Officers' attitudes have rather little influence on their aggressiveness. Neither their attitudes toward legal institutions nor their beliefs about citizen respect have an effect on the number of suspicion stops they make. Their attitudes toward legal restrictions, which might have been expected to have a substantial effect on aggressiveness, have a modest effect that passes only a very low threshold of statistical significance. And their role orientations have an impact—albeit a small one—that is contrary to the one that was hypothesized: Officers with broader role orientations make *more* suspicion stops.²⁷ Overall, then, these attitudinal variables contribute very little to an explanation of officers' aggressiveness.²⁸

statistically significant (at the .10 and .05 levels, respectively); even so, the model that includes all of these variables explains only 12% of the variance in traffic stops.

²⁷ The measure of role orientation is predicated on the assumption that all (or virtually all) officers include law enforcement and crime fighting in their definitions of the police role, and that they vary principally in whether they also include other functions in their role conceptions. This assumption certainly does not hold for some officers, such as those who fall into Muir's (1977) category of "avoiders," whose role orientations are so narrow that they exclude many problems of a law enforcement nature as well as family disputes, public nuisances, and the like. But the indicator of role orientation employed here does not enable one to distinguish these officers from those who are much more enthusiastic about crime fighting. I would not expect that avoiders constitute such a large proportion of all patrol officers that they would so substantially affect these results (see Brown, 1981). But if, contrary to my expectation, they are sufficiently numerous, then the result here is not anomalous. I am indebted to Stephen Mastrofski for this observation.

²⁸ It might be expected that the effects of officers' attitudes would be pronounced when they have more opportunities to make suspicion stops, that is, when they have more discretionary time, and when they are assigned to areas with high levels of crime or high volumes of traffic; but none of these interactions is significant. It might also be expected that attitudes toward legal institutions and legal restrictions would have pronounced effects on the behavior of officers with narrow role orientations; one of these expectations is confirmed, since the effect of officers' attitudes toward legal institutions is somewhat greater in magnitude (.047) and statistically significant for officers with narrow role orientations.

Also note that female and more experienced officers make fewer suspicion stops on average ($b = -.26$ and $-.02$, respectively), and that these differences are statistically significant (at the .10 and .05 levels, respectively); but as

2. **Disposition.** Dispositions can be arrayed a priori along a single continuum, such as from least to most coercive, for some theoretical purposes. Dispositions may also be viewed as categories of response that may empirically cluster under some circumstances and not under others. Thus, for example, verbal warnings may be similar to no action responses on some dimensions and similar to written warnings on others. Discriminant analysis is used to differentiate between or among two or more groups of cases on the basis of one or usually more "discriminating" variables. In this application, the cases are police-citizen encounters that are grouped according to their disposition, and the discriminating variables consist of situational factors and officers' attitudes.²⁹

a. *Traffic Stops.* A discriminant analysis of dispositions in traffic stops indicates that situational factors and officers' attitudes together have only a moderate influence on behavior. Moreover, insofar as these variables enable one to discriminate among dispositions, they discriminate primarily between arrests and other dispositions. Situational factors are of limited utility in discriminating among informal dispositions, and officers' attitudes have almost no explanatory power at all.³⁰

Three discriminant functions are statistically significant (see Table 4). The eigenvalues, which are often taken as a measure of

in the analysis of traffic stops, the inclusion of officers' length of service, race, gender, and educational background increases the explained variance in suspicion stops to only 12%.

²⁹ The discriminating variables are weighted to form a discriminant function. If the discriminating variables enable one to discriminate among the groups, then the scores of cases on this function will be similar for cases in the same group and disparate for cases in different groups; the group centroids, or means of the scores on the functions, will vary accordingly. To achieve maximum discrimination, it is often desirable to derive more than one discriminant function. In general, the maximum number of functions is 1 less than the number of groups, although some functions may have little discriminatory value. For the analysis of traffic stops, a maximum of 4 functions can be derived; for the analysis of disputes, 10 functions can be derived.

The discriminant function coefficients—the weights attached to the discriminating variables—can be interpreted as the contributions of the variables to the differentiation of groups along the function. Hence discriminant analysis can be used in the same way that regression analysis is used to make causal inferences; see Aldrich and Cnudde (1975) and Klecka (1980: 11). Moreover, the results of these discriminant analyses are congruent with those of multinomial logit analyses, although a logit analysis could not be performed on the same 11-category measure of dispositions in disputes.

³⁰ Sigelman (1984: 74–75) describes one way to compute the statistical significance of the contribution of each discriminating variable, using the chi square associated with Wilks' lambda. According to this measure of statistical significance, the contributions of 10 variables are significant at the .05 level: whether the infraction involved DUI, an equipment violation, a moving violation, a routine check, or a speeding violation; the sex, sobriety, and demeanor of the suspect; the presence of other officers; and the officer's attitude toward legal institutions. The contributions of two other variables—the presence of bystanders and the officer's attitude about citizen respect—are significant at the .10 level.

Table 4. Discriminant Analysis of Dispositions in Traffic Stops
(*N* = 747)

	Function 1	Function 2	Function 3
Eigenvalue	.515	.143	.039
Wilks' lambda	.543	.823	.940
Canonical correlation	.583	.354	.193
Centroids			
Arrest	4.07	0.01	0.01
Ticket	-0.21	-0.25	0.03
Written warning	-0.24	-0.00	0.66
Verbal warning	-0.01	-0.08	-0.05
No action	-0.14	0.80	-0.37
Function coefficients			
Situational factors			
DUI	.451	.005	-.216
Equipment	.117	-.410	-.106
General violation	-.019	.050	-.004
License	—	—	—
Moving violation	.086	-.683	.022
Routine check	-.051	.464	-.267
Speeding	.069	-.513	.079
Car chase	-.049	-.258	-.230
Male suspect	-.035	-.005	.134
Minority suspect	.068	.019	-.219
Suspect's age	-.020	.071	.356
Suspect's sobriety	.760	-.011	.174
Antagonistic suspect	-.093	-.218	-.061
Suspect known to officer	.103	.011	-.217
Number of bystanders	.039	.213	.383
Other officers present	.013	.354	-.358
Officers' attitudes			
Citizen respect	-.029	.188	.304
Legal institutions	-.035	.151	.352
Selective enforcement	.051	-.058	.049

the relative importance of the functions (Klecka, 1980: 34–36), indicate that the first function is by far the most important. This function discriminates between arrests and other dispositions. The centroid of cases resulting in arrests is 4.07, while the centroids of other groups of cases are all slightly less than zero and virtually indistinguishable from each other. The rotated function coefficients show that the discrimination among cases is based almost entirely on whether the driver was stopped for DUI and/or appeared to be inebriated. These variables have independent effects, because not everyone stopped for DUI is found to be drunk, and some drivers who are found to be drunk were not originally

stopped for DUI.³¹ By comparison, other variables make a trivial contribution to discriminating among cases along this function. Moreover, this function is not strongly related to dispositions, insofar as it explains only 7.5 percent of the variation in dispositions.³²

The second function is of less theoretical value, judging from the eigenvalue and from the fact that the groups are less clearly separated along this function. Moreover, this function accounts for only 3.5 percent of the variation in dispositions. For the most part, it discriminates between cases in which no action is taken and those in which some formal or informal action is taken. But cases in which a verbal or written warning is given cannot be distinguished on this function from cases in which an arrest is made, and cases in which a ticket is issued are not well removed from cases in which some other action is taken. Situational factors, and especially the nature of the offense, contribute the most to whatever discrimination this function makes possible. Using license violations as a baseline, routine checks are more likely to culminate in no action, while speeding and other moving violations as well as equipment violations are less likely to end with no police action. Neither citizens' characteristics nor officers' attitudes make substantively significant contributions to discrimination along this function.

The third function has very little discriminating power, even though it is statistically significant at the .10 level; it extracts less than 1 percent of the variation in dispositions. As one would thus expect, the groups are not widely separated along this function. It would therefore be easy to over-interpret the function coefficients; even very large function coefficients do not represent substantial influences on behavior. Insofar as the function coefficients are meaningful, one can infer that disposition is affected by the visibility of the encounter, the age of the violator, and the attitudes of the officer toward citizens and legal institutions. But since the discriminant function is itself so weakly related to the groups, one must conclude that these effects are very small.

Overall, the discriminant functions are weakly related to dispositions; together they account for only 11.6 percent of the variation in dispositions. The relationship between dispositions and the

³¹ Fourteen of the 26 drivers who were identified by the observers as drunk were originally stopped for DUI; 6 of the 28 drivers stopped for DUI and for whom data on sobriety are available showed no evidence of drinking when confronted by the officer, and an additional 8 had been drinking but did not appear to be under the influence.

The structure coefficients (i.e., the correlations of the independent variables with the discriminant function), which can be used to determine the nature of discriminant functions, confirm that this function reflects the sobriety of the violator. In this analysis, the structure coefficients closely parallel the function coefficients in magnitude. Interested readers can obtain these coefficients from the author.

³² Daniels and Darcy (1983: 372) explain how to calculate the variation shared by the group variable and a discriminant function.

independent variables is collectively even weaker: These variables account for only 3 percent of the variation in dispositions (see Daniels and Darcy, 1983: 372–373). Using the scores on the discriminant functions to classify the cases into their respective groups, one can correctly classify 41.8 percent of the cases. The value of Goodman and Kruskal's *tau* (Sigelman, 1984: 78–79) is .19, which indicates that classification based on the discriminant functions results in 19 percent fewer errors than classification based on only the frequencies of the dependent variable.³³ Most of this improvement in classification can be attributed to situational factors; a discriminant analysis using only the situational variables correctly classifies 40.3 percent of the cases, with a *tau* of .15.³⁴

b. Disputes. A discriminant analysis of dispositions in disputes indicates that situational factors affect officers' decisions to arrest disputants, but that officers' choices among other responses (especially noncoercive responses) are for the most part independent of situational cues.³⁵ The analysis further indicates that officers' attitudes have little if any systematic impact on officers' behavior in disputes. This is particularly remarkable inasmuch as officers typically exercise wide discretion in such contexts.

Two discriminant functions are statistically significant (see Table 5).³⁶ The orderings of the group centroids provide little insight into the nature of the functions; the placement of the groups, relative to each other, corresponds to no a priori conception of po-

³³ The story is very much the same even when the analysis includes as discriminating variables officers' length of service, race, gender, and educational background. The largest function coefficient associated with any of these variables is that for race on the second function ($-.24$), suggesting that white officers are more likely to take some action. For the first function, the function coefficients for these variables range from .01 to .04 in absolute value. The inclusion of these variables results in correct classification of 43% of the cases, scarcely any improvement over the model presented in Table 4.

³⁴ A discriminant analysis using only the 6 attitudinal variables yielded no significant discriminant functions. Several interactions were tested: those between officers' attitudes about citizen respect on the one hand and suspects' sex, race, age, and demeanor on the other; and those between officers' attitudes toward selective enforcement on the one hand and the type of violation (equipment, moving, or speeding) on the other. Only one interaction—between attitudes about citizen respect and suspects' race—was significant at the .10 level.

³⁵ This conclusion might appear to be at odds with the results of Smith's (1987) study. Using PSS data, Smith examined the effects of situational factors on 3 police responses: arrest, separate, and mediate. He concluded that situational factors have a significant effect on behavior. But since Smith's logit analysis was restricted to violent disputes, and since arrests were made in a large proportion (28.4%) of these cases, one might infer that his results reflect the influence of situational variables on the arrest decision, which is quite consistent with the results reported here.

³⁶ The contributions of three variables achieve statistical significance at the .05 level: whether the suspect or the victim is antagonistic, and whether either the victim or a complainant requests that an arrest be made. The contributions of five variables are significant at the .10 level: whether the dispute involves a fight; whether the parties are friends; whether the parties are black; and the officer's attitudes toward legal institutions and selective enforcement.

Table 5. Discriminant Analysis of Dispositions in Disputes ($N = 216$)

	Function 1	Function 2
Eigenvalue	.596	.334
Wilks' lambda	.164	.261
Canonical correlation	.611	.500
Centroids		
No action	.429	-.783
Mediate only	.572	-.590
Separate only	.129	-.129
Coerce only	-.032	.239
Counsel only	.202	.077
Mediate/separate	.288	-.579
Mediate/coerce	-.393	-.830
Separate/coerce	-.966	-.108
Coerce/counsel	-.643	.177
Mediate/separate/coerce	-.898	.278
Arrest	1.296	1.534
Function coefficients		
Situational factors		
Aggravated assault	.219	.316
Assault	.139	.202
Fight	-.310	.309
Argument	—	—
Disputants black	-.312	.238
Disputants mixed race	.065	.133
Disputants male	.235	.120
Disputants female	.245	-.284
Disputants friends	-.512	-.150
Disputants unrelated	.033	-.309
Disputant(s) drinking	-.329	.108
Disputant(s) drunk	.036	.125
Disputant(s) acquainted with officer	-.087	-.161
Suspect "detached"	-.085	.050
Suspect antagonistic	.250	.406
Victim antagonistic	.275	-.269
Disputant(s) injured	.408	-.354
Disputant(s) armed	.245	.088
Arrest requested	-.036	.673
Complaint signed	.227	.187
Private location	-.233	-.020
Number of bystanders	.066	.131
Other officers present	.428	-.250
Officers' attitudes		
Role orientation	-.102	.208
Citizen respect	-.344	.080
Citizen cooperation	.052	-.240
Legal institutions	.291	.197
Selective enforcement	-.222	.165

lice responses to interpersonal disputes. For example, neither function comprises a spectrum of coerciveness; on the first function, which yields the maximum possible discrimination in dispositions, responses that are in part coercive are found at both poles and at various points in between.

The structure coefficients are of some value in interpreting these functions.³⁷ The first function appears to reflect the severity of the dispute. This function is most highly correlated with whether one or more of the disputants is injured; it is also related to whether the dispute involves an aggravated assault, to the presence of other officers, to whether one of the disputants is armed, and inversely to whether the dispute is between friends rather than between strangers or, more commonly, between family members.³⁸ The second function is strongly related to only one variable: whether one of the disputants asks the officer to arrest another disputant; it is also moderately related to whether the dispute involves an aggravated assault.

To the extent that the first function discriminates among dispositions, it discriminates between arrests and other dispositions; it also discriminates between combinations of coercion and separation on the one hand, and other dispositions on the other. In general, it appears that cases in which the officers adopted responses that were the least intensive in terms of an effort to resolve the conflict have relatively low values on this function, while cases in which officers took more time-consuming measures, including mediation as well as legal action, have relatively high values; the notable exception to this generalization is of course the cases in which officers took no action.³⁹ Referring to the function coefficients, one can see that this discrimination is attributable primarily to situational factors, namely the relationship of the disputants, the presence of other officers, and whether one of the disputants is injured; other situational factors, including the sobriety and the race of the disputants, also make moderate contributions to discrimination along this function. Officers' attitudes have little discriminating power. Notwithstanding the apparent differences among the groups on this function, however, it is weakly related to disposition. The correlations between this function and the dummy variables that represent the respective groups range in ab-

³⁷ As in the analysis of traffic stops, the structure coefficients parallel the function coefficients in magnitude and are available from the author upon request.

³⁸ Observers coded disputes between either spouses or people living together as domestic. For the purpose of this analysis, I have classified as non-domestic the cases in which the relationship of the disputants was unknown; some of these cases are probably domestic.

³⁹ This interpretation is all the more plausible if one acknowledges that mediation can take different forms, and if one supposes that minimal efforts to mediate were made in those cases in which officers also separated and/or coerced the disputants.

solute value from 0 to .23 with but one exception: arrests ($r = .41$); the function can account for less than 4 percent of the variation in dispositions.

The second function discriminates between arrests and other dispositions more clearly than the first function does; other groups of cases are less clearly distinguishable from each other, and the ordering of their centroids is not readily interpretable. The reason for this is hardly a mystery, since the structure coefficients suggest that this function consists largely of the victim's dispositional preference. The function coefficients indicate that an arrest is more likely if the victim asks the officer to make an arrest; smaller effects can be attributed to the demeanor of the suspect⁴⁰ and to whether either disputant has sustained an injury.⁴¹ But like the first function, the second function is weakly related to disposition. The correlations between the group dummy variables and the function range in absolute value from 0 to .16 with two exceptions: no action ($r = -.25$) and arrests ($r = .46$); this function accounts for only 3 percent of the variation in dispositions.

Together these functions account for less than 7 percent of the variation in dispositions; the entire set of independent variables explains less than 2 percent of the variation.⁴² Classification of the cases according to their scores on the discriminant functions re-

⁴⁰ Demeanor is operationalized as the citizen's demeanor at the outset of the encounter, lest antagonistic behavior precipitated by police action be confused with antagonistic behavior that precipitates police action.

⁴¹ Some previous research (Berk and Loseke, 1980–81: 339–340; Worden and Pollitz, 1984: 110, 112–113) has concluded, with some bewilderment, that the arrest decision is not affected by whether the victim is injured. The results of this discriminant analysis suggest one interpretation—an injury, as an indication of the severity of the conflict, makes an arrest more likely—but along the dimension of the dispositional preference of a victim who might fear retaliation following legal action, an injury makes arrest less likely. This interpretation is still not satisfying, however, in view of the relationship between the functions and disposition; the effect of an injury, even as an indication of severity, is quite small.

⁴² Thirty-four interactions were tested, 4 of which achieved statistical significance, and none of which contributed to an improvement in correct classification. Officers' attitudes about citizen respect interact (at the .05 level) with the demeanor of the victim; officers' selectivity interacts (at the .05 level) with whether the disputants are armed and with whether the victim requests that an arrest be made; and officers' attitudes toward legal institutions interact (at the .10 level) with whether the dispute is an aggravated assault. But according to these results, officers' role orientations do not interact with: whether the dispute is a fight; whether the disputants are male, friends, unrelated, drinking, drunk, injured, or armed; the location of the dispute; or whether the victim requests that an arrest be made. Officers' attitudes about citizen respect do not interact with: whether the dispute is an assault or a fight; whether the disputants are friends or unrelated; the location of the dispute; or the demeanor of the suspect. Officers' attitudes about citizen cooperation do not interact with: whether the dispute is an aggravated assault or an assault; whether the disputants are injured or armed; or whether the victim requests that an arrest be made or signs a complaint. Officers' attitudes toward legal institutions do not interact with: whether the dispute is an assault; or whether the victim requests that an arrest be made or signs a complaint. Officers' attitudes toward selective enforcement do not interact with: whether the dispute

sults in 26 percent fewer errors than classification based on marginal frequencies; 32.4 percent of the cases can be correctly classified. Much of the improvement in classification can be attributed to situational factors; an analysis based on the situational variables alone correctly classified 31.1 percent of the cases. Moreover, the improvement in predictive accuracy derives disproportionately from the success of the functions in distinguishing cases in which officers make arrests; of the other cases, 26.4 percent can be correctly classified, with a *tau* of .19.⁴³

IV. DISCUSSION AND CONCLUSION

These results are generally consistent with those of previous research that indicate that situational factors have a significant effect on officers' decisions to make arrests. However, these findings also suggest that situational factors have less impact on officers' choices among informal courses of action. Furthermore, while officers might individually adopt distinctive styles of performing their jobs that manifest themselves in behavioral patterns across similar sorts of situations, these styles bear little relationship to their occupational attitudes.⁴⁴

is an aggravated assault or an assault; whether the disputants are injured; or whether the victim signs a complaint.

Officers' characteristics—length of service, race, gender, and educational background—make little or no contribution to explaining dispositions in disputes. None of the function coefficients exceeds .15 in absolute value, and only 1 (that for education) exceeds .10; no improvement in correct classification is achieved.

⁴³ Comparable results are obtained when the categories of dispositions are further collapsed. For example, using five categories—arrest, coerce (but not arrest), mediate (but neither arrest nor coerce), separate (but not arrest, coerce, or mediate), and no action—2 functions are statistically significant. The first function discriminates between arrest, at one extreme, and the other dispositions, which are clustered near the opposite pole. The second function discriminates between coercive and other dispositions, albeit less clearly than the first function distinguishes arrest. These 2 functions correctly classify 56.9% of the cases, with a Goodman and Kruskal's *tau* of .37. However, since officers took some type of coercive action in nearly 50% of the cases with non-missing values, one could almost achieve this level of classification success by predicting coercive action in *all* of the cases, regardless of situational factors and officers' attitudes (cf. Sigelman, 1984: 75–79, on measures of classification accuracy). Furthermore, virtually all of this explanatory power is attributable to situational factors; the function coefficients for officers' attitudes are small, and their inclusion does not improve the percentage of cases correctly classified. (Cf. Smith's [1987] analysis of violent disputes: 66% of the cases were correctly classified, with a reduction in error of 55%.)

⁴⁴ This analysis neither confirms nor disconfirms the supposition that officers have individual styles of policing; it implies only that, if they do, these styles cannot be accounted for in terms of officers' attitudes. If in fact officers consciously or, what is more likely, unconsciously adopt operational styles, then these styles will be manifested in their activity during shifts (e.g., their pro-activity) and in their actions in police-citizen encounters. If officers who have similar attitudes also have similar styles, then one would expect that their attitudes would be related to their activities and to their actions. One would expect to observe some variation in the behavior of any one officer across shifts and across encounters because of the effects of situational factors

Of course this study is not the last word on situational and attitudinal explanations of police behavior. Few studies have systematically analyzed variation in informal forms of police officers' behavior; studies of the influence of officers' attitudes on their behavior are equally rare. Furthermore, the findings of this study are subject to numerous qualifications concerning sample selection, the operationalization of important theoretical constructs, and the application of quantitative techniques; null findings especially prompt skepticism on these scores when they contradict longstanding and intuitively appealing propositions.

But one should draw from this study implications for the direction of some future research in addition to substantive (albeit tentative) conclusions. First, it appears that the arrest decision is unique in that it is based to a significant degree on situational cues that officers interpret in similar ways. Consequently, while analyses using arrests as a dependent variable might be useful for some analytic purposes, they are quite limited as vehicles for the development of a broader theory of police behavior. Second, and relatedly, situational explanations of the arrest decision probably cannot be successfully applied to the other choices that police officers make on the street; continued research on the situational determinants of police behavior, to the exclusion of other factors, may be of limited theoretical value. Third, there are both empirical and theoretical reasons to expect that officers' behavior cannot be predicted on the basis of their attitudes. Specific propositions about the effects of attitudes were tested here and found wanting; even discounting the results obtained here for the attenuating impact of measurement error, the failure of attitudinal variables to account for a significant proportion of the variation in officers' behavior is striking.⁴⁵ But the findings reported here are consistent with a theoretical perspective that views police behavior as a form of administrative decisionmaking in an ambiguous and uncertain task environment, one that suggests that situational and attitudinal ex-

such as time, place, and type of problem, and that as a result the estimated relationships between attitudes, on the one hand, and activities and actions, on the other hand, would be weaker than the relationship between attitudes and styles. Even if one could control for these situational factors, the relationship would be attenuated by the idiosyncratic forces in officers' task environments, although I would not expect that such factors would obscure the relationship completely.

⁴⁵ One might expect that the clarity and stability of officers' attitudes are related to their length of service, and hence that attitude-behavior relationships would be stronger for officers with more experience. But analyses that include interactive terms for officers with more than 3 years of experience fail to confirm this proposition, as do analyses that include interactions for officers with more than 5 years of experience.

More carefully developed measures of specific attitudes would almost surely reveal stronger relationships than those found in this analysis. Generally see DeFleur and Westie (1963: 30), Wicker (1969: 71-72), Liska (1974a: 264), and Heberlein and Black (1976); but cf. Fischer and Farina (1978). On police see Frank and Brandl (1989: 3-13).

planations are not wrong but simply incomplete; hence it may be desirable to direct some future research along different lines.

Some theoretical progress might be made by extending current models of police behavior to include structural features of police organizations. One such approach would be to analyze patterns of officers' behavior across individual departments (see, e.g., Brown, 1981; Mastrofski *et al.*, 1987) and identify inductively structural characteristics that account for behavior. Alternatively, one could specify, a priori, structural characteristics that could be expected to affect officers' behavior. Smith (1984), for example, constructs a four-fold typology of police departments based on professionalism (aggregate levels of education) and bureaucratization (size and specialization). His analysis shows that arrest rates in selected encounters vary from 6.9 percent to 11.3 percent across the types of departments; encounter-level regressions of arrest on situational factors further suggest that the impacts of some situational factors vary across organizational types, although some of those differences are inconsistent with theoretical expectations. Similarly, Wilson (1968) classifies departments in terms of their relative emphases of different police functions, which, he maintains, reflect the goals and priorities of police chiefs; Wilson further argues that the formal structures of police organizations, such as recruitment practices, horizontal and vertical specialization, and the criteria on which personnel are evaluated, vary accordingly as they are manipulated by chiefs to serve their objectives.

In view of the ambiguity of formal and informal rules, and the uncertainty and intra-organizational variation in their application (Brown, 1981; Van Maanen, 1983), these approaches would seem to have limited promise (cf. Mohr, 1982). Indeed, when the PSS departments are classified in terms of chiefs' priorities, or whether the chief places primary emphasis on law enforcement,⁴⁶ little additional variation in officers' behavior can be explained. The additive effects of this variable on both forms of pro-activity are in the expected direction, but they are small and statistically insignificant; the additive effect on dispositions in traffic stops is negligible, and the effect on dispositions in disputes is counter-theoretical (of-

⁴⁶ The PSS conducted semi-structured interviews with the chiefs. Each was asked whether he would "characterize the department's emphasis as being one of primarily providing service to residents, as primarily trying to suppress crime, or as something in between." Interviewers also inquired whether there were "any specific department policies regarding patrol style or emphasis." Some chiefs may have been unwilling to admit that they consider the service function to fall outside the boundaries of police business, but several were willing to reveal a decided emphasis on law enforcement, and their departments were classified as "legalistic."

As a measure of organizational structure or even of policy content, this measure is crude at best; worse, some chiefs may share the orientations but not the candor of those chiefs whose departments are coded as legalistic. But this indicator has greater face validity than another used in previous research, namely the form of government (Wilson, 1968: 271-277).

ficers in legalistic departments are *less* likely to make an arrest). Nor is there evidence that a legalistic orientation interacts with officer attitudes or situational characteristics to affect pro-activity or dispositions.⁴⁷ These results are no more than suggestive, to be sure, but they are not inconsistent with the broader theoretical framework.

One empirical approach that might better illuminate officers' decisionmaking processes is protocol analysis (Ericsson and Simon, 1984). Protocols, which are verbal reports of the cognitive steps taken to solve problems and make decisions, have been obtained from different types of research subjects performing different kinds of tasks, such as loan officers evaluating applicants, consumers selecting apartments or appliances, and security analysts selecting stocks.⁴⁸ The subjects are asked either to "think aloud" as they make hypothetical decisions or to retrospectively provide similar accounts of earlier decisionmaking. Although no one has systematically collected such verbal data to analyze patrol officers' decisions, there is some *a priori* reason to believe that valid verbal data can be obtained retrospectively from patrol officers (Worden and Brandl, in press).

Content analysis of officers' protocols could probably shed further light on officers' search strategies, or the kinds of information (e.g., situational cues) that they process in choosing courses of action, and on their decision strategies, or the decision rules that link cues to choices. Analyses of protocols could thus offer valuable insights into the premises for officers' decisions. In addition, protocols can and have been used to construct simulation models in the form of computer programs (see, e.g., Newell and Simon, 1972). Simulation models may be more promising than mathematical (e.g., regression) models for representing officers' decision processes, particularly those invoked for more complex tasks (see Ford *et al.*, 1989), because they can incorporate contingent relationships without sacrificing precious degrees of freedom and generally have greater veridicality. When such models have been tested against subjects' actual behavior (e.g., investment decisions), they have enjoyed a high degree of predictive accuracy. Furthermore, by comparing the search and decision strategies of individual officers, it might be possible not only to better describe the differences among officers but also to draw inferences about the sources of these dif-

⁴⁷ The exception to this statement comes from an analysis of dispute resolution by officers in legalistic departments, although the number of cases available for analysis (43) is quite small. Generally, tests for interactive effects were complicated by multi-collinearity. Analyses of subsamples yield largely congruent patterns across the two types of departments, although the smaller *N*s militate against statistically significant findings. Hence these conclusions do not rest on firm empirical ground.

⁴⁸ See Ford *et al.* (1989) and the research cited therein.

ferences, including organizational factors as well as officers' attitudes.⁴⁹

Protocol analysis might be especially useful if it were applied to police recruits, or "rookies." We know very little about the process whereby officers learn their jobs, and much of what we know concerns the development of attitudes. In general, the learning process is largely experiential (Van Maanen, 1974; Fielding, 1988). As rookies, officers observe their field training officers and the results of their actions; later they observe the results of their own actions. But the causal connections between act and outcome are complex and obscure, subject to different interpretations, and there may be several routes to a *satisfactory* (rather than the "best") outcome (cf. McNamara, 1967). Protocol analysis could perhaps shed light on rookies' cognitive strategies of problem-solving and on the later development of individual styles (Fielding, 1988: 94) or "recipes" for action (Manning, 1977: 236).

Moreover, officers' occupational attitudes are shaped at the same time that their behavioral patterns take form, and their attitudes are subject to many of the same developmental forces. Indeed, officers' actions may shape as much as they are shaped by their attitudes (March, 1978, 1982; Weick, 1979). In the context of uncertainty and ambiguity, officers with similar sets of fundamental values and deeply rooted attitudes, which are largely determined by the time officers begin their jobs, can nevertheless be expected to develop different occupational attitudes as they endeavor to derive meaning and lessons from their occupational experiences. The more fundamental, underlying attitudes may have more explanatory power than the more specific occupational attitudes.⁵⁰

Regardless of the methods of data collection and analysis that are employed, a focus on officers' decision premises offers the prospect of substantial progress in developing a theory of police behavior. Such a focus not only is compatible with previous research but also directs attention toward the ambiguous and uncertain cues in the officers' task environments, both within individual situations and in the organizational context. The result should be a better description and explanation of how officers make decisions.

⁴⁹ Previous applications of protocol analysis have compared the decision-making processes of different individuals in order to draw inferences about the effects of individual attributes (e.g., mental capacity or socio-economic status); see Ford *et al.* (1989: 102–103).

⁵⁰ See March and Olsen (1976: chap. 4). If this is true, then it might be possible to reconcile this analysis with Muir's (1977), which examined very abstract and fundamental outlooks concerning human nature and the legitimacy of coercion.

APPENDIX: MEASURES OF OFFICERS' ATTITUDES

Most of the measures are additive indices based on two or more questionnaire items; one measure consists of officers' responses to a single item, and another is a factor scale. An exploratory factor analysis of all of these and other questionnaire items suggests that each of the measures represents a single, distinct attitudinal dimension. Additive indices rather than factor scales are used because, first, additive indices are simple, and second, each index correlates with the corresponding factor scale at or above .90.

Role Orientation. An index formed by summing officers' coded responses to three items:

1. Do you think police should help to quiet family disputes that get out of hand? (1 = no; 2 = yes)
2. Do you think the police here should handle cases involving public nuisances such as barking dogs and burning rubbish? (1 = no; 2 = yes)
3. Police should not have to handle calls that involve social or personal problems where no crime is involved. (1 = strongly agree; 4 = strongly disagree)

A high value on the index reflects a broad role orientation.

Legal Restrictions. A factor scale based on coded responses to three Likert items and two "ratio scaling" items (see Williamson *et al.*, 1982: 359–360). The latter ask officers to rate the importance of protecting civil liberties and of being restrained in the use of force, relative to the importance of being courteous (which was arbitrarily assigned a value of 100). The Likert items were:

1. Police officers here would be more effective if they didn't have to worry about "probable cause" requirements for searching citizens. (1 = strongly disagree; 4 = strongly agree)
2. If police officers in tough neighborhoods had fewer restrictions on their use of force, many of the serious crime problems in those neighborhoods would be greatly reduced. (1 = strongly disagree; 4 = strongly agree)
3. When a police officer is accused of using too much force, only other officers are qualified to judge such a case. (1 = strongly disagree; 4 = strongly agree)

A high value on the scale reflects a negative attitude toward legal restrictions.

Citizen Respect. An index formed by summing officers' coded responses to two items:

1. Most people in this community respect police officers. (1 = strongly disagree; 4 = strongly agree)
2. The likelihood of a police officer being abused by citizens

in this community is high. (1 = strongly agree; 4 = strongly disagree)

A high value on the index reflects a positive attitude about citizen respect for police

Citizen Cooperation. An index formed by summing officers' coded responses to three items:

1. What percent of citizens in this particular (area/jurisdiction) are willing to call the police if they see something suspicious? (1 = 0–25%; 2 = 26–50%; 3 = 51–75%; 4 = 76–100%)
2. Generally speaking, are most, some, or only a few residents of this (area/jurisdiction) willing to press charges in disturbance cases? (1 = few; 2 = some; 3 = most)
3. From your own experience, do most, some, or only a few of the residents of the (area/jurisdiction) report a crime to the police when they are victimized? (1 = few; 2 = some; 3 = most)

A high value on the index reflects a positive attitude about citizen cooperation.

Legal Institutions. An index formed by summing officers' coded responses to two items:

1. Would you rate the cooperation of the local prosecutor's office with the police as WOL? (1 = very poor; 2 = inadequate; 3 = adequate; 4 = good; 5 = outstanding)
2. Would you rate the support of local courts for the police as WOL? (1 = very poor; 2 = inadequate; 3 = adequate; 4 = good; 5 = outstanding)

A high value on the index reflects a positive attitude toward legal institutions.

Selective Enforcement. A single questionnaire item:

Patrol officers on the street are more effective if they are able to decide on their own when to enforce particular laws. (1 = strongly agree; 4 = strongly disagree)

Nonselective officers have high values on this measure.

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