POLICE CULTURE AND COERCION*

WILLIAM TERRILL
Northeastern University

EUGENE A. PAOLINE III
University of Central Florida

PETER K. MANNING
Northeastern University

Researchers have long noted the link between police culture and coercion. To date, however, there have been no empirical studies of this relationship. Using data collected as part of a systematic social observation study of the police in Indianapolis, Indiana, and St. Petersburg, Florida, this research examines the relationship between traditional views of police culture—from an attitudinal perspective—and coercion—from a behavioral perspective. After developing a classification scheme of officers' outlooks in the context of police culture, we examine the extent to which officers' alignment with cultural attitudes translates into differences in coercive behavior. The findings indicate that those officers who closely embody the values of the police culture are more coercive compared with those that differentially align with the culture, suggesting that police use of force is a function of officers' varying attitudinal commitments to the traditional view of police culture. The implications of these findings for policy and future research are considered.

KEYWORDS: Police, culture, coercion, force, attitudes and behaviors

Since Westley's study of policing in Gary, Indiana in the 1950s, police scholars have studied the existence, formation, and boundaries of police culture. This research has generally focused on ways in which officers cope with the strains of their occupational and organizational environment (Brown, 1988; Fielding, 1988; Herbert, 1998; Kappeler et al., 1998; Manning, 1995; Paoline, 2001; Reiner, 1985; Reuss-Ianni, 1983; Skolnick, 1994;

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Van Maanen, 1974). Studies of police coercion have also generated considerable interest. Much of this attention has centered on why officers use force (Fyfe, 1988; Garner et al., 1995; Klinger, 1995; Muir, 1977; Reiss, 1972; Terrill, 2001; Toch, 1969; Westley, 1970; Worden, 1996). Curiously absent from these two bodies of literature are inquires that attempt to quantitatively examine the relationship between alignments with police culture and acts of coercion. Given that coercive behavior is implicitly, and perhaps even explicitly, viewed as a salient correlate of police culture, an empirical examination of the connection between culture and coercion is warranted.

Using data collected as part of a systematic social observation study of the police in Indianapolis, Indiana, and St. Petersburg, Florida, this research examines the relationship between culture—from an attitudinal perspective—and coercion—from a behavioral perspective. More specifically, after developing a classification scheme of officers' outlooks in the context of several culture measures collectively, we examine the extent to which officers' alignment with cultural *attitudes* translates into differences in coercive *behavior*. Our objective is to determine whether officers who closely embody the attitudes of the traditional view of police culture are more likely to use coercion in day-to-day encounters, compared with officers whose attitudes diverge from this view.

We begin by considering traditional views of police culture as a theoretical framework.[1] Next, we consider the relationship between attitudinal dimensions of culture and the use of coercion. Finally, we examine the extent to which officers vary according to their views of traditional culture, and the extent to which variation in cultural attitudes translates into differences in coercive behavior.

POLICE CULTURE

As Chan (1996:111) appropriately notes, "the concept of police culture in the criminological literature is loosely defined." For example, Westley's (1970) characterization of culture stressed the secrecy and loyalty aspects among officers working in a dangerous and hostile work environment. Skolnick's (1994) depiction of culture described a "police personality" that, similar to Westley's characterization, was a function of the dangers of

1. We use the term theoretical framework over literature review because, in many respects, the traditional view of police culture contains all of the components of theory (i.e., concepts and interrelated propositions), although there is variation in terms of the phenomena in which it seeks to explain (i.e., usually some form of police attitude, behavior, or both). In this respect, the environments, coping mechanisms, and outcomes that are outlined here as part of the police culture are organized in such a way to explain, as it has been posited by previous police scholars, the use of coercion. We thank an anonymous reviewer for bringing this distinction to our attention.

policing, but also noted that police use their coercive authority over citizens and seek to appear efficient in the eyes of administrators. Others, like Reuss-Ianni (1983), delineate a culture among "street cops" that is a product of 20 codes, highlighting several different dimensions, including aspects of both the internal and external environments of policing. In a similar vein, Sparrow et al. (1990) deduce six "building blocks" or beliefs of culture that shape the world view of officers. More recently, Herbert (1998) argued a more structural view of police culture that is built around six "normative orders" that constrain the choices and social world of police officers. Although differences in the conceptual nuances of police culture exist, one can deduce a number of common themes present within the literature on police culture—primarily in the context of how officers view and respond to their occupational and organizational environment.

Traditional accounts of police culture describe the coping mechanisms that officers use to deal with the strains created in their two working environments. The occupational environment, which comprises interactions with citizens, includes the physical danger of police work and the unique coercive authority that officers wield. The organizational environment, which comprises interactions with superiors, includes the unpredictability of supervisory oversight and the ambiguity of the police role. These two environments are said to cause much stress and anxiety for officers that is relieved through the prescriptive coping mechanisms of the police culture. Brown (1988:9) summarizes the relationship between police officers and their environments:

> What must be recognized is that patrolmen lead something of a schizophrenic existence: they must cope not only with the terror of an often hostile and unpredictable citizenry, but also with a hostile-even tyrannical-and unpredictable bureaucracy.

Within their occupational environment, officers cope with danger and coercive authority by being suspicious (Skolnick, 1994; Westley, 1970) and maintaining the edge or being one up on citizens at all times (Rubinstein, 1973; Van Maanen, 1974). Within the organizational environment, officers cope with the strains of punitive supervisors, who endorse an ambiguous role orientation, by adopting a lay-low/cover-your-ass orientation to police work (Herbert, 1996; Van Maanen, 1974), and by embracing a crime-fighter role orientation (Brown, 1988).[2] The cumulative effects of the

2. A lay-low approach may be manifested in two different ways. One may be for officers to avoid virtually all police work, choosing to handle the least amount of work possible for organizational survival. A second way, and more of an active approach to laying-low, would be for officers to focus on less ambiguous situations (i.e., more serious offenses), whereby procedures might be more clearly defined within the organization. As such, officers lay-low within the organization, while adhering to the mandate

strains that officers confront in their work environment, and the prescriptive coping mechanisms to deal with these strains, produce two defining outcomes of police culture—social isolation and group loyalty (Westley, 1970; Brown, 1988).

The dangers associated with the occupational environment often prompt officers to distance themselves from the chief source of danger—citizens. The coercive authority that officers possess also separates them from the public. The cultural prescriptions of suspiciousness and maintaining the edge over citizens in creating, displaying, and maintaining their authority (Manning, 1995) further divides police and their clientele. Officers who are socially isolated from citizens, and who rely on one another for mutual support from a dangerous and hostile work environment, are said to develop a "we versus they" attitude toward citizens and strong norms of loyalty to fellow officers. The collectiveness of culture among officers, and the mechanisms used to cope with the strains of the occupation, are related to the use of coercion over citizens. That is, officers, as culture carriers, are expected to "show balls" (Reuss-Ianni, 1983:14) on the street during encounters with citizens.

ATTITUDINAL DIMENSIONS OF CULTURE

Previous research holds that particular valences on a number of dimensions are a part of the traditional view of police culture. Given that the traditional view of police culture is said to consist of a set of attitudes and values that are shared by officers who collectively cope with the strains of their work environment (Paoline et al., 2000), what follows are the most prominent attitudinal features of the police culture.

Research on police officers has noted the negative attitudes that police hold toward citizens (Reuss-Ianni, 1983; Skolnick, 1994; Westley, 1970). As part of a "we versus they" outlook, officers have generally not trusted and have been suspicious of the citizens they police. In addition, officers have historically not believed that those outside the policing profession would assist them in performing their duties, and even if "outsiders" did try to assist they would not be of any real help (Sparrow et al., 1990).

Just as research on police culture has noted the negative attitudes that police officers hold toward citizens, so too have patrol officers' attitudes been characterized with regard to their primary supervisors and upper level managers (Crank, 1997; Crank and Caldero, 1991). Feelings of uncertainty with regard to supervisory expectations and scrutiny have marked these negative attitudes.

The police culture literature also notes that a major source of tension

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of aggressive crime fighting. The latter type of laying low is more of the cultural norm to minimize scrutiny from police bosses.

between officers and supervisors has centered on supervisors' focus of procedural rules and regulations (Skolnick, 1994). Accounts of culture have noted that officers' attitudes toward these restrictions have been unfavorable. The cultural reaction has been a lay-low/cover-your-ass attitude, whereby officers choose to avoid ambiguous situations where negative evaluation might follow from supervisors.

In addition, police culture research suggests that one of the ways that officers cope with the ambiguities of their role in society is by focusing exclusively on crime fighting activities, as service, order maintenance, and community policing efforts have historically not been regarded as "real" police work (Kelling and Kliesmet, 1996; Reuss-Ianni, 1983).

Related to the ways in which officers identify with their role is their general beliefs about tactics of law enforcement or how the role should be performed—aggressiveness and selectivity. Police culture research asserts that officers hold positive attitudes toward aggressive stops of cars and "checking out people," as well as favorable attitudes toward selective enforcement of laws (i.e., assigning felonies a higher priority) (Brown, 1988).

In sum, the traditional view of police culture posits that officers should, almost uniformly, hold strongly unfavorable views of both citizens and supervisors, show disdain and resentment toward procedural guidelines, reject all roles except that which involves fighting crime, and value aggressive patrolling tactics and selectivity in performing their law enforcement duties.

CULTURE AND COERCION—LINKING ATTITUDES AND BEHAVIOR

A focal point of nearly all police culture studies is the way in which officers view and behave toward their main clientele—citizens. Since the beginning of police culture research, explanations of the police-citizen relationship have centered around the coercive authority that officers possess over citizens. As Brown (1988:37) notes, "the routine use of coercion sets policemen off from society." More specifically, police officers are granted the right to use legitimate force, which is accompanied by legal protection (via the courts). The use of coercive authority is, at times, problematic for officers, especially those who are not comfortable using such powers. As a way of coping with this dilemma, the police culture mandates that officers maintain the edge at all times by being prepared or "one-up" on citizens (Rubinstein, 1973), and never backing down from citizen resistance to authority (Reiss, 1972; Reuss-Ianni, 1983). The failure to do so is said to have drastic consequences in terms of police-citizen relationships, as it may allow citizens to gain the upper hand. As Reiss

(1972:150) points out, "[t]here are strong subcultural beliefs that the officer who ignores challenges from citizens loses the respect of citizens and makes it difficult for other officers to work in the precinct." In this sense, the relationship between police and citizens is one in which coercive force is reciprocal, and the culture demands that police officers maintain control (Brown, 1988).

Despite the inherent link between culture and coercion, findings from some studies suggest that not all officers equally share the attitudes, values, and norms of the traditional police culture. More specifically, typology research suggests that officers might cope in different ways with the strains created by their work environment (Broderick, 1977; Brown, 1988; Muir, 1977; White, 1972). If officers differ in the their cultural commitments, one might reasonably expect differences in the use of coercion. For example, in examining Muir's (1977:50) qualitative typology study, he finds that the *enforcer* embodies many of the attitudes of police culture, using high levels of coercion, while the *reciprocator* fails to "exemplify a capacity to integrate coercion into morals."

Taken collectively, typology studies have included several attitudinal dimensions. However, individually, each typology has classified officers based on only two or three dimensions (Worden, 1995). Although this body of research is informative in identifying attitudinal variation among officers along several dimensions, it fails to tell us the extent to which differences in one's attitudinal style translates into differences in behavior. Most often, typologies are created based on officer interviews (either structured, unstructured, or some combination of both); and the connection between attitudes and behavior is either assumed congruence, or when tests are done, they rely on a few illustrative examples that reify the "type" or "style" of officers.

Although some researchers have examined the attitude—behavior relationship—no study involving a patrol officer classification scheme has empirically linked cultural attitudes to some form of behavior (Worden, 1995). Snipes and Mastrofski (1990) attempted to replicate Muir's (1977) research (in another department—"Euphoria"), failing to find a connection between officers' attitudinal and behavioral style. To the authors' credit, they addressed a worthy research question, but their sample relied on extended interviews of only nine officers, and as the authors noted, "a more compelling methodological limitation in the present study is the small number of observations per officer" (1990:290). In addition, in assessing Muir's behavioral "critical incidents," the authors reported that the frequency of these incidents occurred just over once per shift. This leads the authors to conclude that future attitude-behavior studies should include both more officers and observations.

Jermier et al. (1991) used a cluster analysis technique to classify officers

with respect to their differences from the "official" (crime fighting command and bureaucracy) police culture. This work sheds light on cultural fragmentation in police departments, as the authors found five groups of officers based on their occupational attitudes and characteristics. However, like typology studies before them, any links to behavior were based on single illustrative observations of officers from each of the five groups.

Herbert's (1998) recent ethnographic research in the LAPD highlighted connections between police culture, as a function of six normative orders of policing (i.e., law, bureaucratic control, adventure/machismo, safety, competence, and morality), and differential behavior among officers. Herbert (1998:361) explains that each of the normative orders revolve around a principle value that "provide different sets of rules and practices that officers use to define situations and to determine their response." Herbert's dynamic view of culture has important implications for understanding behavioral variation (i.e., coercion), based on differences in how officers interpret and define their occupational world, although systematic examinations of this relationship have yet to be conducted.

RESEARCH PROPOSITIONS

To date, studies of police culture have failed to empirically address the extent to which differences in coercion are a result of differences in cultural based attitudes. Moreover, police researchers have often failed to uncover an attitude-behavior relationship. This failure has been traced to problems in the measurement of police attitudes, behaviors, or both (Frank and Brandl, 1991; Worden, 1995). As Worden (1995:74) explains, "more and better research is needed before these hypotheses can be rejected, however, and better measures of a broader range of police outlooks would improve the quality of such research." In this article, we attempt such an endeavor, by first developing a classification scheme of officers cultural outlooks, and then by examining the ways in which these outlooks relate to their behavior. We argue that the use of coercion with suspects will vary depending on the ways in which officers adhere to the attitudes associated with the traditional view of the police culture. More specifically, based on prior work that suggests an underlying coercive element within the police culture, we posit that those officers who closely embody the values of the traditional views of police culture should be more coercive compared with those that do not equally align with the culture.

DATA

The present analyses draw on data from the Project on Policing Neighborhoods (POPN), which examined policing in Indianapolis, Indiana and

St. Petersburg, Florida during the summers of 1996 and 1997, respectively. Each city was diverse in social, economic, and demographic terms. Although many features were similar across the two departments (i.e., attempts to civilianize numerous positions, upgrading technological capabilities, emphasis on improving community relations), they differed in one key respect that is particularly relevant to the current study—the style of policing promoted by management. Indianapolis officials promoted an aggressive order maintenance approach (i.e., the suppression of public disorders, drug crime, gang activity, and illegal weapons by intrusive law enforcement methods). Conversely, St. Petersburg emphasized a problem-solving/community partnership approach (i.e., identify problems using crime and calls-for-service data and by working closely with community groups) (see Terrill and Mastrofski, 2003 for a more detailed description of both departments' occupational and organizational environments). As such, we would expect, all else being equal, that Indianapolis officers, who work in an organizational environment that supports and endorses aggressive crime fighting, will resort more readily to the use of coercion.

Two sources of data from POPN are used in the present analyses: in-person interviews of patrol officers and systematic observation of officers. Data on officer attitudes are taken from in-person interviews conducted in a private room by trained researchers who did not conduct field observations. Officers were assured by each interviewer that responses would be kept confidential by the project staff. The interview consisted of a mix of questions posed by interviewers and checklists completed by respondents in the interviewers' presence, the latter to minimize interviewer effects. Of the 426 officers assigned to patrol in Indianapolis, a total of 398 were surveyed, producing a completion rate of 93%. In St. Petersburg, 240 out of a possible 246 patrol officers were interviewed, a completion rate of 98%.

Patrol observation was conducted in 12 beats in each city, with the sample of beats matched as closely as possible across the two sites according to the degree of socioeconomic distress. Socioeconomic distress was measured as the sum of the percentages of families with children headed by a single female, the adult population that is unemployed, and the population below 50% of the poverty level—an index similar to one used by Sampson et al. (1997). The sample excluded those beats with the lowest socioeconomic distress; observations concentrate in areas where police-citizen interactions are most frequent (see Parks et al., 1999:492–493 for further detail concerning POPN sampling strategy).

Observations were conducted according to systematics social observation (SSO) methodology by trained researchers, who accompanied officers throughout a matched sample of work shifts in each of the selected beats, for a total of approximately 240 hours per beat (see Mastrofski et al., 1998

for further detail). Observers noted officers' encounters with the public. An encounter was a face-to-face communication between officers and citizens that was more than a passing greeting. Observers recorded encounters with approximately 6,500 citizens in Indianapolis and 5,500 citizens in St. Petersburg, with events ranging from less than a minute to several hours. Among the citizens encountered were crime victims, witnesses, a variety of service recipients, and criminal suspects. The selection criteria used for the behavioral analysis is based on those interactions with people whom police or other citizens present placed in the role of suspect (wrongdoers, peace disturbers, or persons for whom complaints were received). The data file consists of 3,223 police-suspect encounters.

ANALYSIS AND FINDINGS

In testing the proposition that differences in coercion are a result of variation in cultural alignments, we begin by developing a classification scheme of officers based on their attitudes toward citizens, supervisors, procedural guidelines, role orientation, and policing tactics.[3] As previously noted, these attitudes are all rooted in the theoretical framework of police culture. Our expectation is that officers who attitudinally align with the traditional views of police culture will use more coercion than those who do not. Table 1 provides an overview of each of the attitudinal dimensions of culture. A total of ten measures were constructed, based on 22 survey items.[4]

Two measures of officers' attitudes toward citizens are examined. The first measure is based on a single Likert item examining officer distrust of citizens. The second measure is a three-item additive index concerning the

3. Although we measure some of the more widely regarded aspects of police culture, the data do not permit us to measure all components of culture—for example, peer group loyalty and the extent to which officers perceive danger in their environment. Hence, our culture measure offers the opportunity for a partial test of the culture-coercion link, as opposed to a complete test. Moreover, among the measures of culture that we include generally as occupational "attitudes," there are a few that might be regarded more as perceptions or assessments (e.g., citizen cooperation and district management). Although some social psychologists distinguish more finely among these, and other subjective outlooks (see for example Rokeach, 1972), like other social scientists, we include them together as they all are geared toward more concrete objects and situations (i.e., the environments of policing) and not a higher level of abstraction like beliefs.

4. Five of the measures are multiple-item additive indices. The results of preliminary and confirmatory factor analysis indicated that the indices tap a single underlying dimension. Each of the indices correlates with the corresponding factor scale at or above .95. The reliabilities of the indices are acceptable: The alpha coefficients are .75, .89, .71, .73, and .64, respectively, for the citizen cooperation, sergeants, district management, order maintenance, and community policing indices.

Table 1. Attitudinal Measures and Descriptive Statistics (N = 585)

Dimension	Survey Item(s) (mean, standard deviation, and range in parentheses)
Citizens	
Distrust[a]	1. Police officers have reason to be distrustful of most citizens. (2.01, .79, 4-12)
Cooperation[b]	2. How many citizens in [the respondent's beat/CPA] would call the police if they saw something suspicious? 3. How many citizens in [the respondent's beat/CPA] would provide information about a crime if they knew something and were asked about it by the police? 4. How many citizens [the respondent's beat/CPA] are willing to work with the polic to try to solve neighborhood problems? (9.46, 1.81, 3-12)
Supervisors	
Sergeants[a]	5. My supervisor's approach tends to discourage me from giving extra effort (reverse coded). 6. My supervisor is NOT the type of person I enjoy working with (reverse coded). 7. My supervisor lets officers know what is expected of them. 8. My supervisor looks out for the personal welfare of his/her subordinates. 9. My supervisor will support me when I am right even if it makes things difficult for him or her. (16.95, 3.64, 5-20)
Management[c]	10. When an officer does a particularly good job, how likely is it that top management will publicly recognize his or her performance? 11. When an officer gets written up for a minor violation of the rules, how likely is it that he or she will be treated fairly? 12. When an officer contributes to a team effort rather than look good individually how likely is it that top management here will recognize it? (7.59, 2.13, 3-12)
Procedural Guidelines[a]	13. In order to do their jobs, patrol officers must sometimes overlook search and seizure laws and other legal guidelines. (1.64, .88, 1-4)
Role Orientation	
Law Enforcement[a]	14. Enforcing the law is by far a patrol officer's most important responsibility. (3.13, .75, 1-4)
Order Maintenance[d]	15. How often they think that patrol officers should be expected to do something about neighbor disputes. 16. How often they think that patrol officers should be expected to do something about family disputes. 17. How often they think that patrol officers should be expected to do something about public nuisances. (9.08, 1.95, 3-12)
Community Policing[d]	18. How often they think that patrol officers should be expected to do something about nuisance businesses. 19. How often they think that patrol officers should be expected to do something about parents who don't control their kids. 20. How often they think that patrol officers should be expected to do something about litter and trash. (7.05, 1.88, 3-12)
Policing Tactics	
Aggressive Patrol[a]	21. A good patrol officer is one who patrols aggressively by stopping cars, checking out people, running license checks, and so forth. (2.92, .85, 1-4)
Selective Enforcement[d]	22. How frequently would you say there are good reasons for not arresting someone who has committed a minor criminal offense. (3.00, .59, 1-4)

[a] Coded: 1 = disagree strongly, 2 = disagree somewhat, 3 = agree somewhat, 4 = agree strongly.
[b] Coded: 1 = none, 2 = few, 3 = some, 4 = most.
[c] Coded: 1 = very unlikely, 2 = somewhat unlikely, 3 = somewhat likely, 4 = very likely.
[d] Coded: 1 = never, 2 = sometimes, 3 = much of the time, 4 = always.

degree to which officers perceive citizens as cooperative. Officers' attitudes toward supervisors are measured with two separate additive indices. The first measure reflects the degree to which officers hold favorable opinions of their most immediate or front-line supervisors—sergeants. The second measure focuses on more senior personnel, reflecting a general orientation toward top district management.

Officers' attitudes toward procedural guidelines are measured in terms of a single Likert item that assesses the degree to which officers believe they should sometimes overlook search and seizure laws and other legal guidelines. Role orientation is measured with three separate items. The first measure examines officers' law enforcement role orientation, and it is based on a single Likert questionnaire item. The second measure, role orientation toward the order maintenance function, is concerned with the degree to which order maintenance situations are included in their role definitions, which is measured with an additive index of three survey items. The third measure, patrol officers' orientation toward community policing, measures the degree to which officers consider disorderly conditions to be police matters, which is measured with an additive index, comprising three survey items.

Finally, patrol officers' attitudes toward policing tactics are measured in terms of two separate items. The first measure examines officers' views of aggressive patrolling tactics, and it is based on a single Likert questionnaire item (identical to one that Brown [1988] used). A second measure assesses officers' views of selective enforcement, and it is also measured in terms of a single Likert questionnaire item.

CLUSTER ANALYSIS AND PATROL OFFICER GROUPS

A cluster analysis procedure was used to construct our culture measure. Cluster analysis is the most appropriate analytical technique because we are interested in assessing officer similarity based on a set of theoretically relevant variables simultaneously, as opposed to the independent or additive effects of these variables. Cluster analysis allows the user to classify units of analysis (i.e., officers) based on their similarity with respect to a set of variables (i.e., attitudes). Although there are several types of clustering techniques, the one chosen for this research is K-Means Cluster Analysis, which is the most ideal clustering method for large data sets (i.e., more than 200 cases) (Nourusis, 1990). The K-Means procedure, based on the nearest centroid sorting method, makes a preliminary pass through the data to determine the initial cluster centers. Once the centers are determined, the procedure assigns cases to each cluster based on an estimation of the smallest or closest distance between that case and the center of a given cluster—the cluster's centroid (Nourusis, 1990). A group's centroid is a compilation of a combined mean score across all variables clustered.

Cases are then compared with one another based on their cluster membership or how much alike they are to one another, as determined by their nearness to their cluster centroid. For this study, each officer's combined responses to ten attitudinal dimensions are compared with every other officer, and those officers who are most similar are placed in the same cluster or group. Officers in each cluster do not have to be totally identical to one another, but they are more like the officers in their cluster compared with the other clusters.

Because no attitude in this analysis should be weighted more heavily than another, the variables were standardized into z scores (Everitt, 1980). Using a LISTWISE selection criteria, which excludes cases where a response to a given attitude is missing, the working data set includes 585 of the total 638 patrol officers, or 92% of the sample population. In determining the number of clusters, an iterative selection process was used, which established a range of clusters to assess the best fit to the data (i.e., the ratio of the collective distance between officers and their cluster centroid to the number of clusters). In examining the mean of officers' distance from their cluster centers at different cluster solutions (i.e., a range of clusters), one is able to identify the most efficient solution, as mean scores flatten out or fail to exhibit differences from one cluster specification to another. Higher mean scores suggest that officers are more dispersed or further away from the cluster centroids. Table 2 displays the range of specified clusters, the squared distances (to accentuate differences) from the cluster centers of officers for each number of clusters specified, and the difference in mean scores as one moves iteratively across solutions.

Results of the K-Means Cluster Analysis reveal that seven distinguishable groups of officers emerge, as the last substantial decrease in means occurs from a six-cluster model to a seven-cluster model, with few fluctuations through further cluster enumerations. These groups reflect degrees of variation in terms of the most prominent attitudinal features of culture (for a detailed description of the seven clusters, please see Paoline, 2001).

Although these findings suggest that officers' attitudes are less representative of a universally shared culture (as we find more than one group of officers), there are no *a priori* or *ex post facto* ways to rank order each of the seven groups (e.g., a continuum of cultural commitment). Interestingly, there are groups that are more "positively" disposed toward culture than others (i.e., their attitudes are consistent with many of the expectations of the police culture), whereas others appear to represent the antithesis of what is expected from cultural members. For example, three groups hold attitudes congruent with many of the postulates of the police culture, but ranking one over the other in terms of "more" alignment is not readily possible. The police culture literature only suggests that strong

Table 2. K-Means Centroid Cluster Formations

Number of Clusters	Squared Means	Mean Difference
2	8.93	*
3	8.30	.63
4	7.75	.55
5	7.29	.46
6	6.97	.32
7	6.61	.36
8	6.46	.15
9	6.39	.07
10	6.16	.23
11	6.01	.15
12	5.95	.06
13	5.84	.11
14	5.67	.17
15	5.56	.11

cultural alignment will result in high levels of coercion, but variation in coercion from groups other than the extremes (i.e., high or low) remains much more speculative. For these reasons, the groups were trichotomized to represent those who were positively oriented toward the traditional views of police culture (pro-culture), those who were negatively oriented (con-group), and those falling somewhere in the middle (mid-range). This will also make the analysis of behavior more readily interpretable, as groups can be compared with one another in more meaningful ways.

Table 3 provides descriptive statistics of the clusters that comprise each of the three groups of varying cultural commitment. Also reported here are the results of a one-way analysis of variance (ANOVA), which was used to assess statistical differences in attitudinal means across the seven clusters of officers. In order to minimize Type-I errors with multiple comparisons (i.e., overestimating statistical significance), the most conservative ANOVA statistical criteria (i.e., Bonferroni) was used (Nourusis, 1990).[5] It is evident, based on Table 3, that some of the attitudes typically associated with the police culture work to separate the clusters (e.g., role orientation, procedural guidelines, and citizen cooperation) more than others (e.g., selective enforcement and sergeants). These findings have

5. In order to reject the null hypothesis that the means for each of the attitudes were equal across the seven groups, an F-ratio of 2.12 was needed to be significant at the .05 level. The null hypothesis was rejected for all of the attitudes, as F-ratios exceeded this value: citizen cooperation (F = 31.39), citizen distrust (F = 22.75), sergeants (F = 139.69), district management (F = 28.60), legal restrictions (143.72), law enforcement (F = 57.04), order maintenance (F = 64.14), community policing (F = 60.52), aggressive patrol (F = 29.25), and selective enforcement (F = 11.76).

Table 3. Patrol Officer Groups: Descriptive Statistics of Attitudes and Mean Comparisons Among Clusters

	PRO						MID				CON				
Dimension	*Cluster 3*		*Cluster 5*		*Cluster 7*		*Cluster 2*		*Cluster 4*		*Cluster 1*		*Cluster 6*		*Stat. Sig. ($p < .05$) Mean Differences (ANOVA)*
Citizen	M	2.24	M	2.35	M	2.47	M	1.64	M	1.92	M	1.72	M	1.72	1,3; 1,5; 1,7; 2,3; 2,5; 2,7; 3,6; 4,5; 4,7; 5,6; 6,7
Distrust	SD	.74	SD	.76	SD	.73	SD	.64	SD	.73	SD	.67	SD	.79	
Citizen	M	7.84	M	9.72	M	8.35	M	10.24	M	10.43	M	10.16	M	9.38	1,3: 1,7; 2,3; 2,6; 2,7; 3,4; 3,5; 3,6; 4,6; 4,7; 5,7;
Cooperation	SD	1.30	SD	1.64	SD	1.64	SD	1.51	SD	1.53	SD	1.53	SD	1.85	6,7
Sergeants	M	12.41	M	18.60	M	18.25	M	18.37	M	9.78	M	18.07	M	17.48	1,3; 1,4; 2,3; 2,4; 3,4; 3,5; 3,6; 3,7; 4,5; 4,6; 4,7
	SD	3.83	SD	2.12	SD	1.94	SD	2.06	SD	2.69	SD	2.01	SD	2.46	
District	M	6.48	M	8.72	M	7.03	M	8.80	M	5.76	M	7.78	M	6.93	1,2; 1,3; 1,4; 1,5; 2,3; 2,4; 2,6; 2,7; 3,5; 4,5; 4,6;
Management	SD	1.60	SD	1.73	SD	1.89	SD	2.03	SD	1.47	SD	2.07	SD	1.94	4,7; 5,6; 5,7
Procedural	M	2.69	M	3.04	M	1.24	M	1.19	M	1.26	M	1.30	M	1.72	1,3; 1,5; 1,6; 2,3; 2,5; 2,6; 3,4; 3,5; 3,6; 3,7; 4,5;
Guidelines	SD	.71	SD	.56	SD	.45	SD	.41	SD	.52	SD	.56	SD	.87	4,6; 5,6; 5,7; 6,7
Law	M	3.00	M	3.32	M	3.54	M	3.40	M	3.00	M	2.89	M	1.95	1,2; 1,5; 1,6; 1,7; 2,3; 2,4; 2,6; 3,6; 3,7; 4,6; 4,7;
Enforcement	SD	.57	SD	.52	SD	.55	SD	.56	SD	.68	SD	.62	SD	.76	5,6; 6,7
Order	M	7.94	M	9.49	M	8.42	M	10.63	M	8.74	M	7.17	M	10.46	1,2; 1,4; 1,5; 1,6; 1,7; 2,3; 2,4; 2,5; 2,7; 3,5; 3,6;
Maintenance	SD	1.79	SD	1.61	SD	1.57	SD	1.31	SD	1.95	SD	1.23	SD	1.37	4,6; 5,6; 5,7; 6,7
Community	M	5.80	M	7.61	M	6.05	M	8.52	M	6.70	M	5.71	M	8.47	1,2; 1,4; 1,5; 1,6; 2,3; 2,4; 2,5; 2,7; 3,4; 3,5; 3,6;
Policing	SD	1.41	SD	1.75	SD	1.34	SD	1.52	SD	1.48	SD	1.07	SD	1.83	4,5; 4,6; 5,6; 5,7; 6,7
Aggressive	M	3.02	M	3.27	M	3.26	M	3.16	M	2.57	M	2.35	M	2.17	1,2; 1,3; 1,5; 1,7; 2,4; 2,6; 3,4; 3,6; 4,5; 4,7; 5,6;
Patrol	SD	.76	SD	.74	SD	.70	SD	.69	SD	.93	SD	.77	SD	.78	6,7
Selective	M	3.27	M	2.99	M	2.90	M	2.87	M	3.17	M	2.81	M	3.41	1,3; 1,4; 1,6; 2,3; 2,4; 2,6; 3,7; 5,6; 6,7
Enforcement	SD	.49	SD	.56	SD	.56	SD	.57	SD	.47	SD	.63	SD	.56	
	n=51		n=75		n=129		n=53		n=129		n=83		n=58		

important implications for the understanding of police culture among contemporary officers. That is, there are reactions to the work environment in which groups of officers differ rather significantly, and there are some components of the police world that generate higher levels of agreement across the groups. This is consistent with some of the more recent police culture studies that stress both the collectiveness and internal variation among officers (Paoline et al., 2000).

The ANOVA results found in Table 3 also provide empirical evidence for the contrasts that exist among the clusters that comprise the pro-, mid-, and con-groups. For example, when we compare Cluster 1 of the con-culture group with the clusters that comprise the pro-culture group, we find that Cluster 1's means significantly differed for seven of the ten dimensions when compared with Cluster 3; seven out of ten dimensions when compared with Cluster 5; and five of the ten dimensions when compared with Cluster 7. Moreover, Cluster 6 of the con-culture group significantly differed for eight out of ten dimensions, when compared with each of the three pro-culture clusters. Finally, the mid-culture group contains clusters of officers that share attitudes of both the pro- and con-groups, thus falling somewhere in the middle of the two groups. For example, officers in Cluster 2 are similar, in some respects, to Cluster 7 of the pro-culture group (i.e., five out of ten significant mean differences), but also similar to Cluster 6 of the con-culture group (i.e., six out of ten significant mean differences). Similarly, officers in Cluster 4 appear to combine the attitudes of officers in Cluster 3 of the pro-culture group (i.e., five out of ten significant mean differences) and Cluster 1 of the con-culture group (i.e., five out of ten significant mean differences).

Pro-Culture Group

Although we fail to find a cluster of officers that exhibits total congruence with the tenets of the police culture, we do find that the attitudinal composition of officers in these clusters are most similar to traditional characterizations of police culture. Officers in Cluster 3 hold unfavorable views of citizens and supervisors, are positively oriented toward aggressive crime fighting patrol tactics, and endorse selective enforcement of the law. In addition, officers in Cluster 5 are included in the pro-group, as they moderately distrust citizens in the aggressive pursuit of enforcing the law, maintaining order, and eliminating disorder violations. Finally, Cluster 7 contains officers who are the most distrustful of citizens, the strongest supporters of the law enforcement role, and among the highest (with Cluster 5) proponents of aggressive patrolling tactics—all attributes typically associated with traditional characterizations of police culture. What is important, especially with respect to coercion, is that officers in these clusters collectively hold the least favorable views of citizens, in performing their

law enforcement role aggressively, even if it means (for two of the clusters) violating citizen rights. Our expectation is that officers in the pro-culture group will display their coercive authority behaviorally more frequently, and at higher levels, than other groups.

Con-Culture Group

The con-culture group consists of two clusters that, in many ways, represent attitudes that are the antithesis of what is expected from members of the police culture. Although varying in attitudinal intensity, the favorable views of citizens, and (to a lesser extent) supervisors, as well as the nonaggressive approach to policing that neither favorably accepts the crime fighting role nor the violation of citizens' due process safeguards, makes officers in Cluster 1 and Cluster 6 part of the con-culture group. To the extent that officers in the pro-culture group exert more coercion, our expectation is that officers in the con-culture group will be the least coercive.

Mid-Range Culture Group

Two clusters of officers comprise our mid-range culture group. As the title implies, the constellation of officer attitudes in these clusters is not exclusively regarded as part of either the pro- or con-culture group, but instead it falls somewhere in the middle. For example, consistent with the police culture, officers in Cluster 2 endorse a selective approach to aggressive crime fighting. Contrary to the traditional culture, officers in this cluster have very favorable views of citizens, supervisors, and procedural guidelines, while performing roles other than just law enforcement. For some of these attitudes, it is clear that officers in Cluster 4 do not tip the scales in either direction. There does appear to be two distinguishable attributes of Cluster 4 members—their extremely negative attitudes toward supervisors in their organizational environment, and their very strong positive attitudes toward citizens in their occupational environment. Our expectation is that officers in the mid-range group will be less coercive than the pro-culture group, but more coercive than the con-culture group.

Previously we noted that we used a trichotomized measure over a seven-category measure to better illustrate varying commitments to the traditional police culture. ANOVAs for the seven clusters (see Table 3) were used to provide empirical evidence for the reduction of the clusters to the three groups. We also examined ANOVAs for the three-group measure to provide further empirical evidence for this decision. Table 4 illustrates significant mean differences across each of the three groups of varying cultural commitment for each of our ten measures. Table 4 reveals

that the three-group culture measure is an improvement over the seven-cluster measure, as 66.6% of the possible pairwise comparisons are statistically significant compared with the 60.9% found in Table 3.

Table 4. Statistically Significant ($p < .05$) Mean Comparisons Among Pro-, Mid-, and Con-Groups

Dimension	Pro		Mid		Con		Overall
Citizen Distrust	Mid,	Con	Pro	—	Pro	—	2/3
Citizen Cooperation	Mid,	Con	Pro,	Con	Pro,	Mid	3/3
Sergeants	Mid	—	Pro,	Con	—	Mid	2/3
District Management	Mid	—	Pro	—	—	—	1/3
Procedural Guidelines	Mid,	Con	Pro,	Con	Pro,	Mid	3/3
Law Enforcement	—	Con	—	Con	Pro,	Mid	2/3
Order Maintenance	Mid	—	Pro,	Con	—	Mid	2/3
Community Policing	Mid	—	Pro,	Con	—	Mid	2/3
Aggressive Patrol	Mid,	Con	Pro,	Con	Pro,	Mid	3/3
Selective Enforcement	—	—	—	—	—	—	0/3

BEHAVIORAL ANALYSES

Given the creation of an attitudinal culture measure, we turn our attention to examining the extent to which these three groups of officers differ in their application of coercion in day-to-day encounters with suspects. Coercion was defined as acts that threaten or inflict physical harm on citizens. This includes both verbal and physical force. As correctly noted by Klinger (1995:173), "[b]ecause voice commands are viewed as force in law enforcement circles, they are properly included in the universe of behavior that researchers should consider in their studies of police use of force." Thus, we broaden the scope of the dependent variable to include not only physical forms of police force, but verbal force as well (for similar approaches, see Alpert and Dunham, 1997; Garner et al., 1995; Klinger, 1995; and Terrill, 2001). Within this context, our dependent measure is ordinally ranked in the following manner: none, verbal (commands and threats), physical restraint (pat downs, firm grip, handcuffing), and impact methods (pain compliance techniques, takedown maneuvers, strikes with the body, and strikes with external mechanisms).[6]

6. In terms of verbal force, a command was defined as a statement by an officer that was in the form of an order, whereas threats involved a command followed by an explicit or implicit intended consequence for not complying. For physical restraint, pat downs were defined as instances when an officer physically touched a suspect as part of a cursory search; a firm grip included an officer grabbing a suspect in a forceful manner with a tight grip; and handcuffing involved placing restraints on a suspects' wrists.

Bivariate Analysis

We began by looking at a simple cross tabulation (not shown) between our measures of culture and coercion. As expected, officers in the pro-culture group used force more frequently than those in both the mid- and con-culture groups. Overall, pro-culture officers relied on force in 61.3% of the observed police-suspect encounters, compared with 56.1% of mid-culture officers and 50.4% of con-culture officers. This pattern held for each type of force. The most pronounced difference was found within the verbal force category where pro-culture officers used force in 39.0% of the encounters, compared with 35.6% and 33.1% of the encounters involving mid- and con-culture officers, respectively.

Multivariate Analysis

Although a simple cross tabulation demonstrates statistically significant differences across the three groups of officers with respect to the use of force, there are numerous factors that may account for such differences. Hence, we examined officers' attitudinal orientation toward culture (i.e., pro, mid, con) while controlling for situational factors that may affect police use of force. Descriptions of independent variables and their hypothesized relationship to coercion are shown in Table 5.

Legal justification for the use of force is most notably found when suspects are resistant, there is a threat to citizen or officer safety, an increased degree of culpability is present (as reflected in the strength of the evidence measure), and in the course of making an arrest (Terrill and Mastrofski, 2002). Hence, we include each of these as potential determinants of force. Suspect resistance was defined as acts that thwart, obstruct, or impede an officer's attempt to elicit information; failure to respond or responding negatively to an officer's commands or threats; and any physical act, proactive or reactive, against an officer's attempt to control the suspect. Suspect behavior that was cooperative and responsive to police direction was considered and coded as no resistance. Resistance was measured according to the severity of defiance posed to police, and placed along a "continuum" ranging from least to most severe harm. Resistance was ranked in the following manner: none, passive, verbal, defensive, and active.[7]

Finally, for impact methods, pain compliance techniques were defined as holds that cause pain to a specific part of the body; takedown maneuvers included instances when suspects were thrown, pushed, or shoved to the ground, against a wall, against a car or any other surface; strikes with the body included hitting a suspect with the hands, fists, feet, legs, or any other part of the body; and strikes with an external weapon included the use of any item that was not part of the body.

7. Passive resistance was defined as suspect behaviors that were unresponsive to police verbal communication or direction. Verbal resistance included a suspect verbally

Table 5. Description of Independent Variables

Variable	Hypothesized Effect	Definition
Culture		
Pro	+	1 = pro-officers, 0 = non-pro-officers
Mid	+/–	1 = mid-officers, 0 = non-mid-officers
Con	–	1 = con-officers, 0 = non-con-officers
Control		
Resistance	+	Level of suspect resistance: 1 = none, 2 = passive, 3 = verbal, 4 = defensive, 5 = active
Safety	+	1 = suspect has weapon or within jump and reach, 0 = all other
Conflict	+	Suspect in conflict with another citizen on scene: 1 = none, 2 = calm verbal, 3 = agitated verbal, 4 = threatened assault, 5 = assault
Arrest	+	1 = suspect is arrested, 0 = not arrested
Evidence	+	Summative index (0-8) of the evidence of the target's or requester's violation of the law
Male	+	Suspect gender: 1 = male, 0 = female
Non-white	+	Suspect race: 1 = nonwhite, 0 = white
Age	–	Suspect age: 1 = 0-5 years, 2 = 6-12 years, 3 = 13-17 years, 4 = 18-20 years, 5 = 21-29 years, 6 = 30-44 years, 7 = 45-59 years, 8 = 60+
Wealth	–	Suspect class: 1 = chronic poverty, 2 = low, 3 = middle, 4 = above middle
Demeanor	+	1 = suspect disrespectful to police in language or gesture, 0 = all other
Drug/alcohol	+	1 = suspect shows behavioral effects of drug/alcohol, 0 = all other
# Officers	+/–	Number of officers on scene
# Bystanders	+/–	Number of citizen bystanders on scene
Violence anticipated	+	1 = indication of violence from dispatcher, other officers, or observed officers' own knowledge (revealed by comments), 0 = all other
Problem Type	+	1 = problem involves a dispute, traffic incident, or suspicious person, 0 = all other
Proactive	+	1 = officer initiated, 0 = all other
Site	+	1 = Indianapolis, 0 = St. Petersburg

A citizen safety issue was coded when the suspect involved in the encounter was in conflict with another citizen on scene. An officer safety issue arose when a suspect had any sort of weapon on his or her person or within "jump and reach." The evidence measure takes into account a number of different forms of culpability, including eyewitness testimony, physical evidence, and confessions.[8] Further, an arrest was defined as taking a suspect into custody for the purpose of charging him or her with a criminal offense.[9]

Several additional control variables posited to influence police force are also included in the model. We limit these measures to "situational" predictors of force given that previous studies have found situational factors to be the most consistent predictors of force (see Sherman, 1980; Terrill, 2001; and Worden, 1996). Four of the control measures involve suspect characteristics (i.e., suspect gender, race, age, and wealth), whereas another two (i.e., suspect demeanor and impairment) involve suspect presentation behaviors. Demeanor involved the suspect doing something that showed disrespect to the individual or authority of the police officer.[10] The alcohol and drug measure included any indication of use, including the smell of alcohol on the breath, slurred speech, impaired motor skills, or unconsciousness. In addition, both the number of officer and citizen bystanders present on the scene of an encounter can influence the likelihood or level of police force, although the impact of the effect is open to interpretation. Further, when officers anticipate violence, they may be quicker to resort to force themselves. If the dispatcher indicated

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rejecting police verbal communication or direction. Defensive resistance was defined as suspect attempts to evade police attempts at control. Active resistance included the suspect either attempting or actually attacking or striking an officer.

8. A summative index (0–8) of the evidence of the target's or requester's violation of the law was used. Points were assigned for each factor present and summed: officer observed suspect perform an illegal act (3), suspect gave officer a full confession (2), suspect gave officer a partial confession (1), officer observed physical evidence implicating suspect (1), and officer heard testimony from other citizens implicating the suspect (1).

9. Those who are arrested are, of course, formally certified as criminal wrongdoers, and both departments required a degree of physical force (handcuffing) when this occurred. The inclusion of an "arrest" variable allows us to control for that level of physical force required by department procedure to accomplish the arrest, an act that legitimates physical control.

10. This included a variety of verbal statements: calling the officer names, making derogatory statements about the officer or his family, making disparaging or belittling remarks, slurs (racial, sexual, lifestyle). Ignoring the officers' commands or questions did not constitute disrespect, but rather it was classified as passive resistance. In addition, certain gestures and actions were coded as disrespect. These including displaying the middle finger in the direction of the police, obscene gestures, and spitting in the presence of an officer (even if not in the direction of the officer).

the possibility of violence, or if the officer picked up on some other cue, such as the suspect's reputation, the observer coded that violence was anticipated.

Type of problem is included to account for those cases most often associated with an increased likelihood of force. This is similar to what others have done when selecting cases for study (Fyfe 1988). These researchers hypothesized that certain types of cases (disputes, traffic stops, attempts to question suspicious persons) are more likely to lead to force than others (e.g., shoplifting). Therefore, they use problem types as the inclusion criteria. By using "potentially violent" problem types as a predictor in the model, it is hypothesized that such cases will predict force. Further, it is hypothesized that when the encounter is officer-initiated (i.e., proactive), officers may be quicker to assert their authority and to do it more forcefully, perhaps because police legitimacy is lower than when the officer is invited or called on; or alternatively, officers may simply observe some sort of behavior requiring immediate police intervention thereby increasing the probability of force (Reiss, 1972). The final measure takes into account whether agency plays a role in the use of force. Finally, it is important to note that all relevant independent variables are coded to ensure a causal relationship (e.g., the highest level of suspect resistance prior to the highest level of force).

Preferably one would investigate the effect of the situational factors by nesting suspects' encounters within specific officers and subsequently using hierarchical modeling techniques. However, the structure of these data did not permit an analysis of this type. Prior research suggests that ten or more level-one units (in this case, police-suspect encounters) are necessary to estimate stable hierarchical models with acceptable levels of bias (see Bryk and Raudenbush, 1992; Mok and Flynn, 1998). Although the average number of suspects per officer was almost 12, too many officers (58%) had an insufficient number (<10) to allow for nesting of situational factors within individual officers. As a result, to assess the effects of the various determinants, an ordered probit model was estimated using LIMDEP version 7.0.[11]

11. Alternatively, one might run separate ordered probit models on each of the three groups of officers (i.e., pro, mid, and con) or even on the two most pronounced groups (i.e., pro and con) and then perform a model t-test comparing differences between groups to ascertain whether officers in one group (i.e., pro) were significantly more or less likely to use force compared with another group (i.e., con) in reference to additional independent variables (e.g., resistance, safety, demeanor, etc.). However, the central question posited is not whether there are differences between groups according to the various control variables, but whether officers in one group are more forceful than officers in another group on the whole. Performing separate regression equations fails to answer this question.

Table 6. Descriptive Statistics

Variable	Range	Mean	S.D.
Dependent			
Highest level of force	0-3	.80	.81
Culture			
Pro	0-1	.52	.49
Mid	0-1	.26	.44
Con	0-1	.21	.41
Control			
Resistance	1-5	1.21	.66
Safety	0-1	.02	.12
Conflict	1-5	1.13	.57
Arrest	0-1	.11	.31
Evidence	0-8	1.31	1.69
Male	0-1	.72	.45
Non-white	0-1	.63	.48
Age	1-8	.52	1.34
Wealth	1-4	.24	.56
Demeanor	0-1	.09	.29
Drug/alcohol	0-1	.21	.40
# Officers	1-26	2.22	1.61
# Bystanders	1-100	4.23	5.72
Violence anticipated	0-1	.08	.28
Problem Type	0-1	.47	.50
Proactive	0-1	.44	.49
Site	0-1	.43	.49

Table 6 provides descriptive statistics for coercion and each of the independent variables. Ordered probit results are presented in Table 7.[12] The overall model is significant as evidenced by the chi-square statistic. Approximately 27% of the variance is explained, although caution is required as ordered probit only generates a pseudo *r*-square statistic. As expected all of the legal justification predictors were significantly related to force. In addition, officers were also more likely to resort to higher levels of force in encounters involving male, nonwhite, young, and poorer suspects, as well as when the suspect showed signs of alcohol/drug impairment. Further, an increased number of officers on the scene, proactive encounters, and those interactions involving Indianapolis officers were all more likely to increase the probability of force.

Most importantly, the culture measure is significantly related to force as

12. Collinearity diagnostics indicated no evidence of multicollinearity among the independent variables based on their tolerance or variance inflation factors (VIF); the highest VIF was 1.6, well below an acceptable level (see Neter et al., 1985:392).

Table 7. Ordered Probit Estimates—Combined Sites

Variable	Coefficient	S.E.	Significance
Culture			
Pro	.200	.053	.000
Mid	.155	.060	.009
Control			
Resistance	.352	.035	.000
Safety	.705	.161	.000
Conflict	.111	.037	.002
Arrest	1.180	.070	.000
Evidence	.064	.012	.000
Male	.259	.047	.000
Non-white	.163	.043	.000
Age	−.096	.016	.000
Wealth	−.141	.037	.000
Demeanor	−.054	.074	.463
Drug/alcohol	.339	.052	.000
# Officers	.065	.015	.000
# Bystanders	−.001	.004	.824
Violence anticipated	.038	.076	.614
Problem Type	.049	.042	.238
Proactive	.192	.043	.000
Site	.158	.043	.000
Chi-square	1000.589, $p < .001$.		
Intercept	−.512 (.165).		
N	3223.		
Pseudo-*R*-Square	.267.		

well. As hypothesized, encounters involving officers with pro-culture attitudinal dispositions were significantly more likely to result in increased levels of force when compared with con-culture officers—the reference category. Further, encounters involving officers with mid-culture attitudinal dispositions were also more likely (and significantly so) to involve increased levels of force when compared with con-culture officers.[13]

Besides estimating the model using the con-culture group as the reference category, we estimated two additional models using the pro- and mid-culture groups as the reference category (not shown). When the pro-culture group served as the reference category, both mid- and con-officers

13. Note that an additional model, which included three officer level variables (gender, race, and length of service) in addition to the control measures shown in Table 7, was also estimated to ensure model stability. Results showed that officers with less years of experience were significantly more likely to rely on higher levels of force, whereas officer race and gender had no effect. More importantly, however, all of the situational control measures, as well as the pro- and mid-culture measures, remained the same both in terms of direction and significance.

were less likely to use force, but only the con-culture group reached statistical significance. When the mid-culture group served as the reference category, pro-officers were more likely to use force, but showed no statistical difference; conversely, con-officers were significantly less likely to use force. These findings suggest that the use of force over citizens is a function of officers' varying commitments to the traditional culture of policing. Moreover, what is driving this finding are those officers who reject traditional notions of culture (i.e., the con-culture group). The difference between officers who most subscribe to traditional culture and those with mixed views toward traditional culture are indistinguishable in statistical terms.

Finally, because of the potential confounding influence of varying cultures between the two cities, ordered probits were estimated separately for each department, including in the model the culture measure and all of the control variables (Table 8). This permits the opportunity to determine whether the various culture groupings interact differently across departments. For instance, are pro-culture oriented officers in Indianapolis significantly more likely to resort to force compared with pro-culture oriented officers in St. Petersburg?

As demonstrated in Table 8, there is no support for the belief that officers' attitudinal orientations toward culture differ in terms of coercive behavior across departments. Pro-officers in both cities were significantly more likely to use force compared with the con-culture group reference category. Similarly, mid-officers in both cities were also more likely to rely on force, although only St. Peterburg officers reached statistical significance. Nonetheless, as shown in the table's last column, neither coefficient was statistically distinguishable from its counterpart at the other site at the conventional standard of $p < .05$ (requiring a t-value of 1.96 or higher). Further, we see that there are few differences across any of the predictors. Only arrest, suspect age, and the number of officers on the scene produced differences across sites.

Predicted Probabilities. Another way to view the effects of the various determinants is to consider predicted probabilities on each level of force. Given the difficulty of interpreting ordered probit estimates, predicted probabilities are used because of intuitive appeal and for direct comparisons between categories among independent variables (Long, 1997). They offer a means to more easily grasp the effect of independent variables on each of the response categories of the dependent measure.

Table 9 presents predicted probabilities for those factors found to be significantly related to force (in the combined model). For example, officers were most likely to deal with nonresistant suspects with no force or verbal force. The probability of officers using some form of physical force was .16 where the suspect was nonresistant. Conversely, suspects

Table 8. Ordered Probit Estimates—Split Sites

Variable	Indianapolis b[1]	S.E.	St. Petersburg b[2]	S.E.	t_{b1-b2}
Culture					
Pro	.200*	(.072)	.198*	(.079)	0.02
Mid	.107	(.084)	.232*	(.087)	−1.03
Control					
Resistance	.365*	(.044)	.357*	(.058)	0.11
Safety	.906*	(.216)	.439	(.244)	1.43
Conflict	.071	(.046)	.193*	(.061)	−1.60
Arrest	.964*	(.092)	1.482*	(.111)	−3.59
Evidence	.077*	(.017)	.056*	(.018)	0.85
Male	.318*	(.064)	.202*	(.070)	1.22
Non-white	.199*	(.060)	.125*	(.066)	0.83
Age	−.131*	(.022)	−.066*	(.024)	−1.99
Wealth	−.115*	(.051)	−.158*	(.055)	0.57
Demeanor	−.043	(.107)	−.070	(.103)	0.18
Drug/alcohol	.303*	(.072)	.376*	(.078)	−0.69
# Officers	.105*	(.019)	.001	(.025)	3.31
# Bystanders	−.004	(.005)	.004	(.006)	−1.02
Violence anticipated	−.001	(.105)	.038	(.115)	−0.25
Problem Type	.098	(.055)	−.037	(.067)	1.55
Proactive	.112	(.057)	.279*	(.067)	−1.89
Chi-square	583.328, $p < .001$		425.803, $p < .001$		
Intercept	−.288	(.222)	−.606	(.254)	
N	1814		1409		
Pseudo-*R*-Square	.275		.261		

NOTE: b represents the regression coefficient; S.E. represents the standard error of each coefficient; * indicates statistical significance at $p < .05$; t_{b1-b2} indicates t-difference test.

displaying increased levels of resistance were more likely to receive increased levels of force. For instance, a suspect displaying defensive resistance had a 52% chance of receiving physical force, whereby an actively resistant suspect had nearly a 64% chance. Pronounced differences emerged in several of the other control measures as well. For instance, suspects possessing some sort of weapon (i.e., an officer safety issue) were over twice as likely to be physically restrained compared with those who did not (38% versus 17%, respectively). Predicted probabilities for the remaining control variables demonstrate similar, although generally less pronounced, differences.

Turning to the primary variable of interest, Table 9 shows probability differences in the pro- and mid-culture groupings. Encounters involving officers with pro-cultural attitudinal dispositions were more likely to involve each form of force. Here, the greatest difference is found in physical restraint. Encounters involving pro-cultural officers had nearly a 20%

Table 9. Predicted Probabilities

	Level of Force			
	No Force	Verbal	Restraint	Impact
Culture				
Pro				
Yes	.355	.445	.195	.005
No	.432	.420	.145	.003
Mid				
Yes	.348	.447	.200	.005
No	.407	.430	.160	.003
Control				
Resistance				
None	.420	.424	.153	.003
Passive	.290	.456	.246	.008
Verbal	.183	.439	.358	.020
Defensive	.104	.379	.472	.045
Active	.053	.311	.547	.089
Safety				
Yes	.166	.431	.380	.023
No	.396	.433	.168	.003
Conflict				
None	.397	.433	.166	.004
Calm Verbal	.355	.445	.195	.005
Agitated Verbal	.315	.453	.225	.007
Threat	.276	.457	.258	.009
Assault	.240	.455	.293	.012
Arrest				
Yes	.092	.364	.493	.051
No	.443	.415	.140	.002
Evidence				
Level 1	.399	.432	.165	.004
Level 3	.351	.446	.198	.005
Level 7	.261	.456	.273	.010
Male				
Male	.364	.443	.188	.005
Female	.465	.405	.128	.002
Nonwhite				
Nonwhite	.369	.442	.185	.004
White	.431	.420	.146	.003
Age				
13–17 Years Old	.312	.454	.227	.007
21–29 Years Old	.383	.437	.176	.004
45–59 Years Old	.459	.408	.131	.002
Wealth				
Chronic Poverty	.320	.452	.221	.007
Low	.372	.441	.183	.004
Middle	.426	.422	.149	.003
Above Middle	.482	.397	.119	.002
Drug/Alcohol Use				
Yes	.293	.456	.243	.008
No	.419	.425	.153	.003
Officers on Scene				
Two	.397	.433	.166	.004
Four	.348	.447	.200	.005
Six	.300	.455	.237	.008
Proactive				
Yes	.351	.446	.198	.005
No	.425	.422	.150	.003
Site				
Yes	.365	.442	.188	.005
No	.426	.422	.149	.003

chance of physical restraint, compared with 15% in those encounters involving non-pro-cultural officers. Comparatively, differences in verbal and impact force were relatively small.

Encounters involving officers designated as mid-cultural were also more likely to involve each form of force. As illustrated in Table 9, in encounters involving mid-cultural officers, there was a 65% chance of force being applied, whereas encounters involving non-mid-cultural officers had about a 59% chance of force being used. Again, the greatest difference is observed in physical restraint (i.e., 20% versus 16%, respectively).

DISCUSSION

The present analysis illustrates that officers' attitudinal differences toward the traditional view of police culture produce differences in coercive actions over suspects. Officers who embody the values of the traditional police culture, or have mixed views toward the culture, were more likely to use coercion compared with officers with nontraditional cultural attitudes. In addition, although officers from Indianapolis (the department that emphasized aggressive order maintenance) were more likely to embody the values of the traditional culture, compared with officers from St. Petersburg (the department that promoted a problem-solving/community partnership approach), this had no effect in terms of applying coercion. Pro-culture-oriented officers in both departments were more likely to use force, but the difference between the two departments was statistically indistinguishable. Interestingly, however, officers in Indianapolis, on the whole, were more likely to resort to force. Hence, it appears that the style of policing promoted by top management in Indianapolis (i.e., aggressive order maintenance) does seem to matter. Nonetheless, officers who subscribe to traditional notions of culture relied on coercion more readily than those who do not, irrespective of the style of policing promoted by top leadership.

In many respects, our analysis suggests that although broad-based, almost caricatures of "police culture" have general utility, they are misleading. Such caricatures have formed the basis for conventional wisdom for over four decades. We agree that the occupation contains strains as well as the organization in which officers work, but the ways in which officers handle these strains appear to be more fragmented than depicted by many police researchers. The findings reported here from the cluster analysis support the notion that some groups of officers (i.e., the pro-culture group) are traditional culture carriers, but we also find variation in adherence to "the" police culture (i.e., mid- and con-culture groups). As

such, reports of a universally shared police culture might have been overstated by police scholars. In this sense, this study adds to our understanding of the complexities of culture, some of which researchers are now beginning to acknowledge (see, for example, Herbert, 1998; Manning, 1994; Paoline, 2001).

Unless the matter at hand, what we have called awkwardly perhaps, "the traditional view of police culture," is conceptualized more finely, measured carefully, and associated with specific behavioral outcomes, it will remain a misleading gloss on complexity. Typology research conducted in the 1970s hinted at some of the variation among officers, but systematic connections to potential differences in behavior were nonexistent. Links between themes in the culture and specific outcomes are needed rather than generalities about what police do, or feel, or their personalities. In this study, we have attempted to forge these vital links, and future research should continue such endeavors. Moreover, as prior research suggests (Reiss, 1972; Worden, 1995), situational- and encounter-based studies help to disentangle the nuances of police behavior more than relying merely on broad-based studies of generalized attitudes or descriptions of extraordinary and rare violent events. As this implies, and as our analysis shows, coercion is an interactive matter that takes place in encounters or situations that vary and must be taken into account.

Although we believe these findings contribute to an overall understanding of the relationship between culture and coercion, our conclusions come with some caution. Although the attitudes included in our classification scheme of officers are all rooted in the traditional view of police culture, there are some attitudes that were not captured (e.g., peer group loyalty, social isolation, perceptions of danger, etc.). Further, the interplay between the style of policing promoted by top leaders and officers' views of culture is not sufficiently clear and requires additional attention. In addition, as with any study of a small number of nonrandomly selected departments, our ability to generalize from these findings is limited. Future research should work to add to the "incompleteness" of the current research in contributing to a richer understanding of police culture and its behavioral implications. This would undoubtedly contribute to cumulative knowledge—building in the area of policing.

Finally, researchers should work to disentangle potential socializing influences as transmitters of culture (e.g., peers, field training officers, supervisors), as well as examine additional behaviors that are linked to police culture (e.g., variations in citizen complaints, citizen support, arrests, etc.), especially as the work environments continue to change during the community era. Given the potential negative consequences of coercive police-suspect incidents (e.g., highly publicized incidents, citizen

complaints, etc.), researchers and practitioners alike need to continually focus on ways in which to reduce this form of behavior.

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William Terrill is an Assistant Professor in the College of Criminal Justice at Northeastern University. He has directed several nationally funded research projects and has published numerous scholarly articles on policing, crime in public housing, and systematic social observation. In 2001, he authored *Police Coercion: Application of the Force Continuum* (LFB Publishing). He earned his Ph.D. in 2000 from the School of Criminal Justice at Rutgers University, Newark.

Eugene A. Paoline III is an Assistant Professor in the Department of Criminal Justice and Legal Studies at the University of Central Florida. His research interests include police socialization and culture, occupational stressors among criminal justice practitioners, and theoretical development in criminal justice. He is the author of *Rethinking Police Culture: Officers' Occupational Attitudes* (2001, LFB Publishing) and holds a Ph.D. in Criminal Justice from the University at Albany, State University of New York.

Peter K. Manning received a Ph.D. from Duke in 1966. He holds the Elmer V. H. and Eileen M. Brooks Chair in Policing at Northeastern University, College of Criminal Justice. He has been a fellow of NIJ, the Rockefeller Foundation, Balliol and Wolfson Colleges, Oxford, and the Socio-Legal Centre at Oxford. He is listed in *Who's Who in America* and has been awarded many contracts and grants. He is the author and editor of some 13 books. His research interests include the rationalizing of policing, crime mapping and crime analysis, uses of information technology, and qualitative methods. The second edition of *Narc's Game* (1979) will appear in 2003 (Waveland Press), and his monograph, *Policing Contingencies*, is forthcoming with the University of Chicago Press.