UNDERSTANDING POLICE USE OF FORCE

OFFICERS, SUSPECTS, AND RECIPROCITY

GEOFFREY P. ALPERT AND
ROGER G. DUNHAM

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Understanding Police Use of Force

Understanding Police Use of Force focuses on the extraordinary and rare event that develops when physical force is used by the police. Whenever police officers come into contact with citizens, there is always a chance that the encounter will digress to one in which force is used on a suspect. Fortunately, most police activities do not result in the use of force, but those that do take on an interesting pattern of interaction between the officer and the citizen. This volume presents a brief survey of prior research on police use of force as well as original data reported for the first time. The original data on police use of force include the Force Factor, or the relative use of force compared to the level of suspect resistance. The data also include the sequential order of the event and a view from the suspect's perspective. The book proposes a new conceptual framework for examining and assessing police use of force: the Authority Maintenance Theory.

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The Context of Police Use of Force

WE LIVE IN A WORLD that increasingly displays distaste for the use of physical force to direct or control the behavior of others. Democracy as a form of governmental decision making is winning out over totalitarianism, and war is less tolerated as a solution to conflict. On a nongovernmental level, there are severe penalties for fighting and bullying in schools and spanking is increasingly viewed as inappropriate parenting. Similarly, the movement to end violence against intimates is growing ever stronger with increasingly severe penalties for spouse abuse. There is one profession in Western society, however, that has not only retained the right to use physical force against its citizens, but has its members trained and encouraged to do so. The police are prepared to use force on a daily basis and while there may be considerable pressure to limit and restrict the use of force by the police against citizens, no one is calling for them to abandon its use. Indeed, it would be unconscionable to make such a demand.

Despite the fact that the police represent the last bastion of civilian government-sanctioned violence against citizens, research on police use of force is surprisingly scarce. David Bayley (1994) drew attention to the discrepancy between the significance of the police role in modern society and the amount of attention given to it by researchers. He argued that the paucity of research on the police is a function of their pervasive presence, their relatively routine occupational activities, and their absence as pivotal players in major historical events. The relatively recent interest in police research originates from their greater involvement in the major social and political events of the 1960s and 1970s; however, it was not until the 1980s that sufficient data on police use-of-force incidents became available to researchers. Prior to that time, police departments either did not keep sufficient records or refused to make them available to those who were interested in studying them. Recent reviews of the existing research on police use of force reveal severe

theoretical and methodological shortcomings (National Research Council, 2003). Police–citizen encounters have historically been considered a static event by researchers, who have focused almost exclusively on the officer's point of view. This book evaluates police use of force from both the officer's and the citizen's perspectives. We introduce the interactive nature of police–citizen encounters that result in force and we present a theoretical basis to understand this process.

The purpose of this book is *not* to look at police officers' routine or ordinary behavior, but to focus instead on extraordinary and rare officer behavior that develops during incidents where physical force is used. Whenever police officers come into contact with citizens, there is a chance that the encounter will digress to one in which force is used on a suspect. Fortunately, most police activities, such as traffic or investigative stops, or even arrests, do not result in the use of force.

The "known" frequency of police use of force varies depending on the ways the events are captured or counted. Similarly, the rate of force used depends on the definition of the baseline incidents against which they are measured. In this formula, the numerator, or lowest level of force counted, can range from verbal coercion, "pat-downs," handcuffing, and come-along holds, to levels that include extremely physical tactics, both offensive and defensive, including the use of deadly weapons. Clearly, the stricter the definition, the fewer the number of cases that will be captured in the numerator. Additionally, the inclusion of handcuffing and pat-downs as use-of-force events can create a problem, as these actions may be required by policy or for officer safety, resulting in no officer discretion. As the measures used in previous studies vary considerably, it is difficult to determine a true rate of force used by the police. Different studies also use different denominators, which range from all police–citizen contacts to only discretionary contacts or arrests. As the denominator increases, the rate of force decreases.

Although there are significant methodological challenges in determining the frequency and rate of police force, it is unquestionably an uncommon occurrence. The instances where force is used are nonetheless of great interest to citizens. In fact, most complaints against the police are generated from this limited number of police–citizen contacts. A clamor of public criticism and legal entanglements frequently follow these rare incidents where significant force is used, often affecting the stability of a police department and its relationship with the community. Therefore, an examination of the behavior and environment surrounding the rare use of significant police force is of vital importance. This book seeks to examine these issues and to provide a conceptual framework for further study.

This introductory chapter frames police use of force in the broad socio-historical context of the development of American policing. It demonstrates a process of parallel change with respect to society's views toward the use

of force, its regulation, and the types of research conducted on it. This context will provide a framework for interpreting the findings of our own research. Chapter 1 reviews the research literature on police use of force and provides a base of knowledge on what we know. Our research sites are discussed in Chapter 2. Chapters 3 through 7 present the various phases of our research. Finally, in Chapter 8, we conclude with an interactive theoretical construct in order to begin the process of building an explanation for this type of police–citizen interaction and to provide a framework to guide future research.

Before we discuss the details of our research, it is necessary to provide some background information on the police and their use of force. Many aspects of policing have changed over time, as have the purpose and practice of using police force to manage or control citizens. There exists extensive literature on the general changes in policing; conversely, information on the specific changes in the context of police use of force over time is lacking. Peter Manning (1997) explored and analyzed the nuances that shape police work. He investigated and evaluated the changing role of the police in society. While he did not focus on police use of force specifically, his cogent arguments concerning the control features of the police are convincing and offer an important contribution to our understanding of how the role of police use of force has changed. His key conceptual work, linked with that of police scholar Samuel Walker (1998), explained why, in the nineteenth century, the police had very little discipline, how excessive use of force was commonplace, and how organizational changes occurred over the years. The arguments put forth by Manning and Walker, among others, remain relevant to contemporary policing issues as well as to the purposes and uses of force more specifically.

According to Walker (1998), hostility toward the police was the rule in the nineteenth century. Citizens had little respect for the police and expected them to be corrupt and brutal. There are numerous recorded incidents in which juvenile gangs taunted officers and threw rocks at them. Similarly, adults would fight back when being arrested. Public disrespect and police brutality were an open and accepted aspect of police–citizen interactions during this period, and inappropriate police behavior generally went unpunished. Today, most police departments have comparatively strict and extensive policies controlling their use of force. They provide training to limit the types and levels of force and many use violence-reduction techniques. Most departments also have internal investigative units and many have civilian boards to review officer use of force (Walker, 2001). Departments tend to have progressive disciplinary policies and procedures for those who use force improperly. In addition, municipalities and individual officers are subject to civil and criminal liability for such misconduct. Clearly, policing has undergone considerable change, and views on police use of force and its

regulation have undergone as much if not more change than other aspects of policing (National Research Council, 2003).

Periods of Change

Changes in the purpose, use, and regulation of force employed by the police can be best understood through examination of three major periods in the history of policing. The first period, that of *nonregulation*, occurred when the police used whatever level of force they saw fit in order to control the population. During that time, police ignored and/or silenced criticism of what might be called their excessive force, except in the most extreme cases of abuse. As a result of nonregulation, police abuse of force was rampant during this era.

The second period coincides with the movement to *professionalize* the police; it is characterized by self-regulation through the principles of professionalization. However, in spite of this attempt at change, abuses continued, albeit at a lower rate. During this period, the police began regulating their own use of force, and while there was a move toward accountability, it had not yet reached a functional level.

The third period began in response to a series of recent historical events, including civil disobedience, increased legal liability, and the development of community-based policing. This period is noted for the change in the regulation of police from internal to *external control*. Key to these events was the emergence of a new group of regulators located in the courts, political arenas, and community groups. During this period, social science research on police use of force became a new source of information for the police as well as for critics, and it brought a new form of accountability to the police.

Peter Manning made a powerful point when he suggested that researchers must look beyond the police and their explanations of events to understand the use of force. This book builds on his central notion and introduces an interactive process to study police use of force. The three periods outlining the changes in perception with regard to police use of force will be examined in greater detail before any assessment of the previous research is broached.

The Era of Nonregulation

Greene and Alpert (1999) argued that the history of policing in the United States has been a struggle to resolve two basic issues. The first issue is the definition of police work, or what the police should be doing, and the second involves how best to oversee or regulate police operations. During the era of nonregulation, the police role was poorly defined and the police had little, if any, supervision. Greene and Alpert (1999:532) argued that the

"police were seen as mercenaries who worked for the wealthy to control the working class and to maintain hierarchical authority." As a result, the lower and working classes continually challenged the legitimacy and actions of the police. Drunkenness, corruption, and brutality were commonplace, and the police were expected to do very little for the lower and working classes except to keep them under control. Because police officers were expected to be brutal, it was futile for citizens to protest any abuse of power, nor were they in a position to do so. Since they did not expect to be able to control police brutality, only a minimal effort was made. The routine response to police brutality was simply to fight force with force. Because citizens had little respect for the police and expected them to be corrupt and brutal, they often showed open hostility toward them. Brutality was such an integral part of policing that it usually went unpunished. Albert Reiss quoted a former police officer employed in the New York City Police Department at the beginning of the twentieth century:

> For 3 years, there has been through the courts and the streets a dreary procession of citizens with broken heads and bruised bodies against a few of whom was violence needed to effect an arrest. Many of them had done nothing to deserve an arrest. In a majority of such cases, no complaint was made. If a victim complains, his charge is generally dismissed. The police are practically above the law. (Reiss, 1970:274)

One recurring task of the police around the turn of the century was controlling strikers and breaking up strikes to protect the capitalist enterprise by ensuring cheap labor. The police were known for aggressively breaking up labor's business meetings by using physical force and for the "wholesale clubbing of strikers" (Stretesky, 2002:15). Clearly, many types of police–citizen interactions resulted in violence during this era. Fear of citizen-initiated violence against the police was so great at one point that in New York City, many officers refused to wear their badges for fear of being identified and assaulted (Stretesky, 2002:14).

One explanation for this unfortunate situation was the close relationship between the police and the political machines in major cities. The police had no presumptions of being bound by constitutional principles or of being impartial in the administration of the law. Officers were drawn from the lower classes, were poorly paid, and lacked uniforms, training, and permanent professional status. Historian Mark Haller (1976) summed it up best when he pointed out that although the police were formally engaged in law enforcement, they had little orientation toward legal norms.

As has been noted, police brutality was an accepted aspect of life and was directed at controlling the lower and working classes, many of whom were recent immigrants with no means to change police misbehavior. Stretesky (2002:12) concluded his analysis of policing during this time period by

noting, "It is clear that early American police came out in force to violently repress strikes, maintain order among the working class, ensure racial oppression, and control threatening populations." These targeted populations did not have the power to change the role of the police or to regulate police behavior. Furthermore, the more politically powerful classes, who could exert some control over the police, were not targeted by the police, and often had a vested interest in controlling the "threatening populations." As Walker noted, "What a later generation called 'police brutality' was a routine part of American policing in the nineteenth century" (Walker, 1998:62).

During the era of nonregulation, meaningful social science research on police use of force and brutality was nonexistent. The citizens affected most by police brutality were in no position to do anything about it. The idea of conducting research to investigate and document police use of force, establishing a commission to review claims of brutality, and formulating recommendations to control it were not realistic goals at the time. Police scholars have noted the lack of research on the police in the United States and have attempted to explain it. For example, Bayley (1994) noted the discrepancy between the importance of the police in American social life and the amount of attention given them by scholars. It was not until the beginning of the twentieth century that concerns about police abuse of force were transformed into a meaningful movement for serious reform: the Progressive Movement.

The Era of Self-Regulation

By the beginning of the twentieth century, police departments were under serious attack by the social and political reformers of the Progressive Movement. This movement focused much of its criticism on the political machines in large cities and their partisan political organizations. The influence of the reformers had grown. Now a serious threat to the corrupt political machines of the previous epoch, reformers wanted to instill ethical and democratic values into the political and administrative processes of metropolitan governments. Since police departments were embedded into the political machines, they necessarily became a critical target. Reformers sought to take the politics out of policing, given the assumption that a large part of police corruption and brutality was due to the partisan and corrupting influences of the political machines. If police departments could be removed from these corrupting influences, it was hoped that their officers would be less brutal and apply their powers more equitably. Therefore, progressive reformers sought to solve the problem by "removing the police structure and function from the political apparatus of the cities" (Greene and Alpert, 1999:533). Once the corrupting influences of the political machines were removed, reformers sought to establish internal administrative

procedures to ensure ethical policing from within the department. Greenberg (1976) argued that the police had become semiautonomous from the controlling capitalist class by the turn of the twentieth century. This was essential if the police were to be accepted as legitimate agents of social control. It was also a first critical step toward the establishment of internal control through principles of professionalism.

Indeed, many of the changes suggested by reformers were influenced by the objectives of professionalism. Initiatives included making the police organization more systematic, increasing the standards for hiring and promoting officers, introducing (better) training, and regulating police practices, such as the use of force. Most of the measures focused on providing internal processes to regulate police behavior. One important step was to establish civil service procedures to ensure objective decision making and thereby eliminate the partisan practices of the past. While reformers recommended some civic control of the police, progressive police chiefs emphasized professional values as a more effective solution to better management and regulation of officers. This change emphasized reform of internal mechanisms of control and favored the idea that refined and professionalized police organizations could regulate their own behavior. A number of the early progressive police chiefs, including August Vollmer, the chief of police in Berkeley, California, and O. W. Wilson, the chief of police first in Wichita, Kansas, and later in Chicago, Illinois, all stressed the creation of a "professional" police force. They emphasized professional administration, policies to control discretionary action, and a college education for officers so that they could understand the importance of their role in the social order.

Greene and Alpert (1999:534) contended that "between 1920 and the early 1960s policing reform focused on improvements of the organization and management of the agencies, almost to the exclusion of other equally important concerns." A major stimulus for reform was the establishment of the National Commission on Law Observance and Enforcement (the Wickersham Commission) by president Herbert Hoover in 1929. This was the first national study of the American criminal justice system, and the Commission's report, published in 1931, provided support for police professionalization. The report shocked the country with its exposé of police brutality and called for major reforms of the police (Walker, 1998; Walker and Katz, 2002). Reformers believed that establishing professional police organizations with professional practices would not only make the police more effective at crime control, but would also increase their legitimacy in the eyes of citizens. Officer decisions were to be controlled by new and enhanced policies and training and then further scrutinized by improved supervision and accountability systems. Furthermore, new technologies, such as police cars, radios, and telephones, would allow departments to have a greater degree of supervision and control over patrol officers. More rigorous training

of officers was suggested, and higher standards for hiring and promotions were set. All of these reforms were enhanced by new and strict policies on police violence.

There is little doubt that police professionalism and the reforms it brought had a significant impact on police violence and on legitimizing the police (Stretesky, 2002). However, police brutality and violence did not disappear. For example, the civil unrest of the 1960s was met with considerable police violence, indicating that internal controls of police use of force were deficient and incapable of controlling police violence in many situations.

Most of the social science research on police use of force during this period came late in the era. Garner, Maxwell, and Heraux (2002), who reviewed research findings on police use of force, placed the first meaningful social science research in the late 1960s and early 1970s, a development that was linked to the political climate. As Herman Goldstein noted (1990:9), "Crises stimulate progress. The police came under enormous pressure in the late 1960s and early 1970s as they were confronted with concern about a rapidly rising crime rate, civil rights demonstrations, racial conflicts, riots and political protests of the war in Vietnam." This recent research interest in the police was therefore largely generated by their greater involvement in major social and political events of the time. The concerns of the public about police practices led to increased federal funding for police research and a corresponding improvement in methodological sophistication. Before this time, most information on police brutality and violence was in the form of personal narratives of independent observers, including those who were involved in the incidents. In the words of Garner et al.,

> The narrative accounts by independent researchers tended to emphasize the researchers' personal interpretations of police work and to highlight alleged and sometimes confirmed incidences of unusual, dramatic, illegal, or inappropriate behavior by officers or civilians. These descriptions and insights provide a valuable basis for generating hypotheses about the nature of force and the situations in which force is used. However, because they have been limited to personal observations of a few officers in a few precincts in a few jurisdictions and have relied on qualitative assessments of single observers, these personal narratives provide an incomplete and potentially inaccurate picture of normal contact between the police and the public. (Garner et al., 2002:707)

This type of research tends to focus mainly on finding enough evidence of police misconduct to support the ideological concerns of the observers. It has generally been prescriptive and has rarely provided important information such as the frequency with which the police use specific types or levels of force or the individual, situational, and organizational characteristics

associated with using various types and levels of force (Garner et al., 2002). The third era would bring a new form of regulation and would stimulate a new focus for research.

The Era of External Regulation

The social and political crises beginning in the 1960s led to a new emphasis on reforming society in general and, more specifically, the police (Skolnick and Fyfe, 1993). Reform had become a popular cause among most segments of society, and for the first time in the history of American policing, reformers were able to establish significant controls over the police that were external to the police department and to local political organizations. This type of control challenged entrenched aspects of the internal organizational and workforce cultures that were the foundation of most police agencies. Greene and Alpert (1999) pointed out that police cultures have consistently rejected the idea that the police should be more directly accountable to those outside of that agency (Crank, 1998). Against such strong resistance, the new reforms would need to be backed by powerful social forces if they were to succeed. In spite of this resistance, the social movements of the 1960s and 1970s generated sufficient social power to accomplish many important police reforms.

Samuel Walker (1998) argued that social issues at this time had a significant impact on public attitudes toward the police, and subsequently on the police officers and their organizations. The civil rights movement challenged police discrimination and resulted in a series of race riots that placed the police in the eye of a social storm. The police were harangued by angry minorities and political leaders. The dramatic rise in the crime rate in American metropolitan centers, the protests against the unpopular Vietnam War, and the growing concern over drug use among the baby boomers all brought additional pressure to bear. The controlling role of the police and their willingness to use significant levels of force, and occasional extreme violence, to contain political protests caused public confidence in the police to plummet, reaching its lowest level in decades. The new burst of reform stimulated by these events was aimed directly at the police (Walker, 1998).

The Courts as Police Overseers

The new reformers focused more than those before them on establishing controls over the police from outside the police departments and the local governments that managed them. The courts therefore became an important source of control in two ways. First, the courts were used to assess the appropriateness of many longstanding police practices and procedures

through legal challenges. Second, both individual officers and their governing entities were increasingly subject to civil and criminal liability for unreasonable actions, policies, and practices.

Samuel Walker (1998) made the argument that the Supreme Court's decision in *Mapp v. Ohio* (1961) established the Court as a significant source of external control over the police. The *Mapp* decision set a national standard for police searches and seizures and instituted the "exclusionary rule" for evidence seized illegally. This represented the most intrusive and overt control the police had experienced to date. What followed was a series of federal and state court decisions that focused on various police procedures. Each decision had an impact on the police, and many were related to the police use of force. The most notable Court decisions with respect to police force were *Tennessee v. Garner* (1985) and *Graham v. Connor* (1989). In the former, the Court ruled that police were not justified in their use of deadly force to seize a nondangerous fleeing felon. In the latter, the Court ruled that force used by the police had to be evaluated objectively and without the benefit of hindsight. By restricting police use of deadly force and by analyzing objectively lower levels of force the Court tailored the ways in which police departments had to manage their use of force against citizens (Alpert and Smith, 1994).

In *Critical Issues in Police Civil Liability,* Victor Kappeler (2001) documented a judicial trend toward allowing governmental liability in cases involving police misconduct or negligence. He stated that civil liability exists "when police officers fail to perform their assigned duties, perform them in a negligent fashion, abuse their authority or just make poor decisions" (Kappeler, 2001:1). Specifically, there have been an increasing number of civil liability cases involving police use of excessive force or brutality. While it is difficult to get an exact count, Kappeler (2001) reviewed available information on civil cases filed against the police and concluded that there has been "an explosion" of cases since the 1960s, a trend he found "alarming." He concluded that while many police chiefs argue that they have a good record against these types of suits, what was once a 4 percent rate of successful verdicts against the police has doubled in recent years (Kappeler, 2001). In addition, many claims against the police are settled prior to trial. Given the current situation with increasing numbers of lawsuits and growing success in obtaining settlements or judgments against the police, civil litigation has become an important concern for police administrators as well as rank-and-file officers. Studies of officer concerns over liability show an increasing number of officers who worry (some excessively) about civil liability. Kappeler (2001:6) reported that police chiefs, seasoned officers, and new recruits are all seriously concerned about civil liability. Civil litigation is becoming one of the most significant sources of regulation of police use of force outside of the police organization.

Government Commissions and Research on the Police

Another source of outside regulation of police practices was a series of commissions that investigated police practices, initiated research on the police, and recommended serious reform. Three major studies were commissioned to examine police practices in detail and to update the 1931 Wickersham commission report (National Commission on Law Observance and Enforcement, 1971). These include the report of the President's Commission on Law Enforcement and Administration of Justice (1967) entitled *The Challenge of Crime in a Free Society* (1967), a report of the National Advisory Commission on Civil Disorders (1968), and a report of the National Advisory Commission on Criminal Justice Standards and Goals (1973). Each of these commissions was a major undertaking by a large number of scholars and practitioners who focused on solving some of the problems in both policing and the criminal justice system as a whole. The commission reports include multiple proposals to tighten the controls over police discretion, including the use and abuse of force. Another outcome of the commissions was the initiation of significant government-funded research on police practices. The commission-sponsored research and the research tradition that followed have had an unmistakable impact on policing. This stream of research has produced an important knowledge base, which has provided both the impetus and justification for serious reforms. Another outgrowth of the research, perhaps just as significant as the reforms, is the trend toward data-based decision making by police administrators.

Citizen Review of the Police

Another source of external control instituted during this period because of the belief that the police could not control themselves is citizen review of police practices. Citizen review involves a process by which citizens who have been appointed by government officials review allegations of police brutality or other abuses by the police. While the idea of citizen oversight of the police emerged during the 1950s and 1960s and resulted in some departments having operational programs, most were short lived and not very successful due to stiff opposition from the police. However, the idea of citizen review had a revival during the 1980s and 1990s. As Bayley stated,

> The 1980s represented a watershed period with respect to the moral dimension of policing. During those years, police in jurisdiction after jurisdiction were forced to share responsibility for maintaining appropriate levels of discipline with newly created civilian review bodies. In effect, police lost their monopoly on determining whether police officers were treating citizens properly and reasonably. (Bayley, 1994:91)

The number of police departments that had some form of citizen review procedure in place increased steadily from thirteen in 1980 to more than sixty-five by 1995 (Walker and Wright, 1995). The major force behind the citizen review movement was civil rights groups complaining about racial discrimination by the police, especially with regard to use of excessive force and brutality targeting minorities (Terrill, 2001).

The movement has grown not only in terms of the number of police departments affected, but also in terms of the amount of power turned over to the citizen review boards. In the past, most citizen review procedures were restricted to monitoring or auditing the complaint process, or simply handling complaints while relying on the police for the facts of the case (Walker and Krisel, 2001). In other words, these oversight boards did not review individual complaints or become involved in the investigation of facts. Most often, they would rule on the appropriateness of the agency's behavior as it processed complaints. Now, there is a trend for citizen review boards to collect their own facts, some with the power of a subpoena. Additionally, many boards are ruling on the appropriateness or reasonableness of an individual officer's actions and suggest specific disciplinary actions for offending officers (Bayley, 1994). Bayley summarized this trend as follows:

> There is a progression to the growth of civilian oversight, usually beginning with reviewing investigations, then supervising them, and finally undertaking investigations independently. The taking of disciplinary action against police officers represents the most extensive civilian involvement, with review boards allowed first to recommend and later to supplant police authority . . . No step is taken without bitter political conflict between the police and their communities. (Bayley, 1994:91)

In spite of this very significant movement toward an increasingly meaningful civilian review, it by no means permeates all, or even most, police departments. However, there is no mistaking the noteworthy trend toward more external control of the police in the United States.

Federal Consent Decrees

An interesting and groundbreaking development in police oversight is a new trend for the U.S. Department of Justice and police agencies to enter into consent decrees to avoid costly and time-consuming litigation (Ginger, 2002). James Ginger, the independent auditor for many of these consent decrees, commented on their significance:

> On April 17, 1997, the US Department of Justice implemented an historic consent decree with the City of Pittsburgh, Pennsylvania, marking the first time in American history that the federal branch of American Government

became a significant partner in the management and supervisory functions
of a local police agency. The consent decree, a legal maneuver in lieu of civil
litigation, gives the Department of Justice the ability to stipulate – with the
'consent' of the City of Pittsburgh – dramatic changes in Pittsburgh Bureau
of Police practices of policy development, training, supervision, discipline,
internal investigations, and personnel practices . . . In effect, the decree is pur-
portedly designed to bring 'the rule of law' back into the lexicon of American
policing. (Ginger, 2002:99)

According to Ginger (2002), the U.S. Department of Justice has since
taken similar action in Steubenville, Ohio, in 1998 and with the New Jersey
State Police in 1999. Further, the U.S. Justice Department is either "con-
sidering or actively pursuing similar consent decrees" in New York City;
Los Angeles; Chicago; Buffalo, New York; Indianapolis; Scottsdale, Arizona;
Riverside, California; and Columbus, Ohio; in addition to a number of other
large city police departments (Ginger, 2002:100).

The significance of this type of supervision can best be appreciated by
contrasting it with the ingrained tenet of American policing that insists on
local control. Ginger (2002) correctly captured the irony by asking, "How
did a country with a well-recognized paranoia concerning centralized police
come to such a series of events?" Even if one questions the principle under-
lying some of the developments in gaining control of the police during the
third period, it is difficult to dispute the view that significant progress was
made in researching police use and abuse of force on citizens.

Social Science Research during the Third Era

A number of important advances in use-of-force research evolved during
the third period of development. One of the most significant changes was
the source of data used. It was not until the mid-1980s that researchers were
able to use official police records that provide more structured data on a
greater number and range of use-of-force incidents than was possible when
using independent observations (Garner et al., 2002). The rare nature of
police use of force generally, and the more rare use of high levels of force,
created a real problem for the independent observation method used in
earlier research. One cannot observe the police long enough to obtain
a reasonable sample of use-of-force incidents for analysis. Unfortunately,
it was not until the mid-1980s that a few of the more progressive police
departments began allowing researchers access to the force information on
police records (Garner et al., 2002). Of course, this source of data also is
not without its drawbacks, but at least it provided a better sample and range
of use-of-force incidents for examination.

Another significant advancement in use-of-force research during this pe-
riod involves the definition and measurement of force. Early in the era,

measures of force were not clearly specified or measured in many of the studies, and most researchers used a simple dichotomy of force and no force. Later, some researchers began using force continuums representing very low levels of force extending to use of deadly force (Garner et al., 1995; Alpert and Dunham, 1997; Terrill, 2000).

The final, and perhaps most significant, advancement in use-of-force research was the evolution of an interactive model of police–citizen exchanges. The advent of community-based policing changed the focus from simply what the police do or what citizens do to how the police and citizens interact. Further, prior research on the interactions of encounters between police and citizens has shown the strong influence of one actor's actions on those of the other. Given that the immediate goals of a police officer are to define and control a situation, a citizen will likely cooperate with the officer unless or until he or she senses that the officer is going to make a decision or take action that is contrary to his or her interest. In such situations, most citizens will resist verbally, without success. However, in some situations, both officers and suspects can act in ways that frustrate the other, giving rise to a subset of interactions that can result in the use of force by the officer and/or physical resistance by the citizen. Clearly, the goals and objectives of the outcome of the encounter differ between the participants; however, the actors share the responsibility for its result. Because the behaviors in a police–citizen encounter are not static but change depending on a variety of unfolding circumstances and events, it is necessary to study the actions and reactions of both the police officers and the citizens.

To capture the significance of the interaction sequence, force researchers implemented two new developments in their research. The first development was a more sophisticated measure of force that included actions on both sides of the police–citizen interaction. Alpert and Dunham (1997) developed the Force Factor, a measure of the level of police use of force relative to the level of suspect resistance. In 2001, Terrill took the concept of a force continuum and Force Factor scores a step further by devising the Resistance Force Comparative Scale, which codes each instance of resistance and force into sequences within each encounter to determine whether the level of force used falls within a standard continuum of force determined by police departments. The second development was to focus data collection and analysis on the sequence of events unfolding in police–citizen interactions and on how the ordering of events affects the outcome of force. This requires using more detailed accounts, such as police narratives, to decipher the sequencing of events in the encounter. As a result of these developments, a complexity has been introduced into use of force research that requires more rigorous data collection and more sophisticated analyses than found in the past, but which has the promise of producing improved explanatory models.

Summary

This brief examination of the evolution of police use of force regulation and concomitant research has taken us from the initial attempts to study an important social phenomenon, through a process of cumulative development, into a more sophisticated phase that will yield a much clearer picture of these very closely watched police–citizen interactions. Interestingly, the trends in research parallel the changes in the views toward police use of force and its regulation. This book has as its goal the development of a conceptual framework that will both regularize the definition of force and contextualize its research, taking into account not only the actions of both participants within police–citizen interactions, but also a number of other variables that can affect outcomes and conclusions. However, before we discuss the research that allows us to propose such a framework, we provide a detailed review of the relevant prior research.

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Police Use of Force

The History of Research

THE DIFFICULTIES associated with conducting research on a group such as the police that, historically, has had great power and autonomy should not be underestimated. As we have seen, the role of the police in society is one of authority with the right to use force. The right of the police to use force to fulfill their responsibilities and the fact that they work in an environment without direct supervision contribute to making abuse of this power all too easy. Unfortunately, these considerations also make it very difficult to study the police and their possible abuse of power. Given the unquestionable relevance of these issues to our society, researchers have attempted to understand and explain the phenomenon of police use and abuse of force. This book proposes a new conceptual framework for examining and assessing the use of force, a framework discussed at length in Chapter 8. A brief survey of prior research on police use-of-force is therefore both necessary and useful to demonstrate the progress that has been made in police use-of-force research, and to highlight the obstacles that remain to attaining a more complete understanding of when and why force is used in law enforcement.

An Imperfect World: Necessary Force

Since the beginning of law enforcement, people have been concerned about the use of force by the police. As early as 1215 English barons ordered restrictions placed on all sheriffs and constables to curb abuses of power by the forces of law and order. Police lawlessness, including systematic corruption and nonenforcement of laws, infected U.S. policing as well. Reforms designed to address police misconduct called for higher standards for the recruitment of personnel, better training, and increased accountability (Uchida, 2001). These earliest reforms may have had a short-term impact, but they did not provide long-term answers. Nonetheless, and despite the

enormous progress made in law enforcement, the problems identified by the English barons still exist in law enforcement today.

In contemporary society, citizens rely on the police to ensure their safety on a daily basis, and those police officers consequently retain the authority to arbitrate citizen disputes that rise to the level of criminality. Today, the public expects police officers to perform their duties and to execute their responsibilities in a professional manner, without abusing either the law or the citizens they are sworn to protect. The sanctioned use of force, which is the necessary and defining characteristic of their job, therefore comes under greater and greater scrutiny (Bittner, 1970).

Of course, in a perfect world, citizen compliance with laws would not be coercive and the use of force by the police would be unnecessary; in our complex society, however, expecting citizen compliance is a gamble at best. As Bittner noted thirty years ago, the use of force is at the core of the police role; however, the true skill of a well-trained police officer is the ability to accomplish the police mission while avoiding the use of force or only using minimal levels of force as situationally justified (Bittner, 1970, 1974).

The police face numerous threats as they perform their duties. The availability of firearms, the vast potential for profits from enterprises such as drug trafficking, and low regard for human life by some elements of the criminal population place the police in a precarious position when making arrests and securing public safety. Moreover, many arrests require officers to make split-second judgments, and to take immediate action (Fyfe, 1997). Those actions, however, may subsequently be judged to be excessive. Clearly, one of the central problems is determining the level of force that is "necessary" to make an arrest and to take a suspect into custody (Alpert and Smith, 1994). When an officer uses a level of force considered excessive or unwarranted, the understanding between the general public and the police is undermined. The use of excessive force is considered an egregious violation of trust; this loss of trust, in turn, threatens the ability of all officers to function properly in society. The practical challenge is to balance the amount of force an officer uses to perform his or her duties efficiently with the unpredictable actions of citizens, and to reach an understanding of when and why excessive force is used, which clearly helps to avoid such circumstances. Meeting this challenge will positively influence the public trust of the police and the tasks they perform.

Issues Surrounding the Use of Force

The above discussion demonstrates the key role of force in facilitating effective policing and of reinforcing a positive public perception of the role of the police in society. The notion of reasonable force, however, is problematic. It remains difficult to define in practical terms and is equally difficult for social scientists to measure and define accurately. The use of force by

the police is also subject to much media attention, particularly in situations where excessive force is used, which attunes the general public to how the police explain their actions. Public perceptions, however, may be fuelled more by sensationalist reporting than by an accurate reflection of the overall picture. Clearly, the media often report the most deplorable abuses, such as the incidents involving Arthur McDuffie, Rodney King, Abner Louima, and Amadou Diallo. While these abhorrent events may be the exception rather than the rule, they have nonetheless promulgated a perception of volatility and a movement for the renewed reform of policies, training, supervision, and accountability, and a related endeavor to assess police agency and officer efforts toward reform.

Reasonable and Excessive Force

Before considering the results of previous research, it is important to understand the difference between reasonable and excessive use of force. In all likelihood, the majority of U.S. citizens are not concerned about police actions that are considered reasonable and necessary to apprehend suspects who actively and physically resist the officers. Such force is perceived as equitable, a legitimate consequence of an individual stepping outside of the societal contract that binds each of us. However, there is concern over instances in which the police employ force that is determined to be excessive and unwarranted (Skolnick and Fyfe, 1993). Kenneth Adams (1999) stated that the police may use reasonable and prudent force in situations that necessitate protection of either themselves or other citizens, and also to effect arrests. He placed limitations on this when he said, "the amount of force used should be proportional to the threat and limited to the least amount required to accomplish legitimate police action. Any force employed above and beyond this balance is excessive" (p. 1). When judging the appropriateness of the use of force, a critical element is the officer's perceived threat with regard to the suspect. Reasonable, well-trained officers must evaluate a threat based on the realistic danger to themselves and the tactical situation. Officers must understand the importance of taking tactical advantage, which could include seeking cover, and not placing themselves in situations in which force becomes unavoidable. Clearly, there is a fine line between what is and is not excessive force, and that line is often a subjective one (Alpert and Smith, 1994). Although the use of force has been studied since the early 1960s, results have not been conclusive; hence, a more conceptually and methodologically sophisticated research effort is necessary.

The Difficulty of Defining the Use of Force

The difficulty of finding a uniform definition for the levels of force used by police, and of defining reasonableness, complicates research on the issue.

It is relatively simple to identify deadly force – the application of force likely to cause death or serious bodily injury. However, measuring less-than-lethal force is far more problematic. In the less-than-lethal categories, the use of fists, feet, or a nightstick may be easy to recognize and classify, but whether use was defensive or offensive, reasonable or excessive, will depend on the circumstances (Garner, Maxwell, and Heraux, 2002). For example, if a police report indicates that an officer had to tackle a fleeing suspect in order to apprehend him, the action appears to be offensive but reasonable. If an officer hits a suspect with a fist while the suspect is assaulting the officer, the action appears to be defensive and reasonable. However, if an officer hits a suspect after the suspect has stopped resisting, it is likely an excessive action, depending on the context of the activity and the interpretation of the suspect's behavior. In other words, a specific action or the use of a tactic may be reasonable or necessary to apprehend a suspect or to protect the public, while the very same action or tactic may be unreasonable and excessive without suspect resistance.

Terms such as "improper," "illegitimate," and "unnecessary" are used to describe situations in which an officer's actions are judged to be unreasonable. More value-neutral terms, such as offensive and defensive, are sometimes applied to a given situation. The criteria for assessing use of force or suspect resistance may contain similar terminology, but interpretations can vary among observers, agencies, policies, and researchers. Even when the level of force or resistance is identified, its purpose and reasonableness is difficult to determine, leaving it open to debate.

Because of these difficulties, incidents of police use of force are often misinterpreted or exaggerated by the media, resulting in the public perception that the abuse of force is at epidemic proportions. The New York State Commission on Criminal Justice and the Use of Force concluded correctly that, "factors substantially contributing to misperceptions about use of physical and deadly force by law enforcement officers include . . . failure to appreciate the relative infrequent use of physical and deadly force by law enforcement personnel" (Bayley and Garofalo, 1987:B6). Since the use of force and excessive force can be defined or measured in a variety of ways, it is impossible for researchers to state definitively the frequency with which the police use force justifiably or to excess. Nonetheless, certain working definitions can at least assist us in the attempt to move toward a definition of what does and does not amount to a reasonable use of force.

Some Definitions of the Use of Force

The consensus among law enforcement officials and researchers is that force can be defined as physical action taken to control the movement or freedom of another individual. If there is no resistance to certain police actions, such

as handcuffing or the use of firm grips and "come-along" holds, the use of force may be inconsequential or negligible and no record of the activity need be made. However, if a suspect resists, if a struggle escalates the level of force, or if there is a resulting injury or reported claim of injury, a report should be generated to ensure a record of the events. Despite this broad agreement, definitions of what does and does not amount to force in a given situation vary dramatically. It is useful, therefore, to examine some current definitions before moving to a full examination of the research in this field.

Miami-Dade Police Department

One excellent approach is that of the Miami-Dade Police Department (2002). Officers must file a report under the following circumstances:

1. Force is applied that is likely to cause an injury or a complaint
2. An injury results or may result from a struggle
3. There is a complaint of an injury
4. A chemical agent is discharged
5. A baton is used
6. The neck restraint is utilized
7. There is an injury or complaint of an injury that results from guiding, holding, directing, or handcuffing a person who offers resistance

Descriptions of these events must be documented, as is the case when a firearm is discharged. Without such documentation it would be impossible to reconstruct the activities of an officer or an agency, including the amount of force applied or the amount of suspect resistance, and the situation or circumstances surrounding the events. The more incidents reported and the greater the detail describing those incidents, the more an analyst will be able to understand the nature and extent of force used by officers against citizens and the level of resistance used by citizens, against the police.

The U.S. Supreme Court

The level of force that the police are legally allowed to use to control and apprehend a suspect is defined by our legal system. The U.S. Supreme Court ruled that the use of force at arrest must be "objectively reasonable in view of all the facts and circumstances of each particular case, including the severity of the crime at issue, whether the suspect poses an immediate threat to the safety of the officers or others, and whether he is actively resisting arrest or attempting to evade arrest by flight" (*Graham v. Connor*, 1989).

However, many real-world experiences do not permit an objective analysis. Objective analysis in real situations where real people are required to

make snap decisions about the use of force result in what can be termed "subjective objectivity" (Alpert and Smith, 1994). The Supreme Court guidelines, therefore, are difficult to apply, as each individual perceives each situation differently. As Adams (1995) noted, "Even when a situation appears unambiguous to some, their view may not be shared by others" (p. 63).

Reiss and Situational Definitions

Reiss (1968) provided one of the first situational definitions of excessive force by constructing conditions where the use of force would be considered unnecessary. Examples include the use of physical force by an officer without a subsequent arrest, the use of force by an officer when a citizen did not verbally or physically resist that officer, and the continued use of force after a citizen was in custody. While helpful, Reiss's constructions address only absolute conditions. Situations that are not as clear-cut as Reiss's formulations require additional analysis. Most importantly, he did not address varying levels of suspect resistance.

To label the level of force used by police excessive requires a judgment that the force used was unwarranted and that the police overstepped the limits of their authority. These judgments are often subjective assertions incapable of scientific verification (Adams, 1995:62). Agencies do not have a standard methodology to measure the use of force. Different definitions of force and different definitions of police–public interaction inevitably yield different statistical results. Broader definitions of the use of force, such as those that include grabbing or handcuffing a suspect, will produce more reported incidents. Similarly, situations that involve "come-along holds," loud voice commands, or even the police officer's presence may be coercive, but they are not likely to be considered as use-of-force incidents by police agencies [for a different opinion, see Terrill (2003) and Terrill and Mastrofski (2002)]. The definition of force used, therefore, is axiomatic to the results of any research and should be examined closely.

Whatever the definition researchers choose to adopt, the clear consensus from research findings is that police use physical force infrequently (Dunham and Alpert, 1995). The extent of its use, however, does not diminish the importance of research in this field. Developing an understanding of the situations in which it occurs, and the people against whom it is used, are important concerns for researchers and practitioners alike. To achieve a fuller understanding of police use of force, the sources of data must also be examined. As we will see, how data are collected play just as important a role in research as which definitions of force are used. The following section examines the various sources researchers have used to gather data, and places these sources in context, given that the source, the research, and the findings are often inseparable. This will allow us not only to highlight how

data are gathered, but also to provide an indication of the findings of the more important research.

The Importance of Data Sources

Major goals of previous research in this field have included examining the nature, the extent, and the "causes" of the use of force (Worden, 1995; Garner et al., 2002) as well as determining against whom the force is used (Geller and Toch, 1995:99–112). Researchers have also sought to determine whether the use of force is distributed evenly across social groups or "disproportionately to those who are at the margins of society – the poor, racial minorities, and youths" (Terrill and Mastrofski, 2002:217–18). Further, the ability to implement conceptual and methodological innovations, such as those proposed in Chapter 8, and to conduct meaningful research based on the interactive model mentioned earlier, depends on the quality of data available to researchers. The national survey discussed earlier provides a broad overview of the data on use of force in police departments across the United States. A closer scrutiny of the documentation and data used in and produced by police departments will help provide a clearer picture of the obstacles that researchers face, and will inform some of the solutions addressing those obstacles adopted by researchers and managers.

Studies of police use of force have relied on three major data sources:

1. Official records, providing the police perspective
2. Observations of police behavior by researchers
3. Citizen complaints and attitudes

Official Records: The Police Point of View

Prior to the 1990s few agencies maintained records of incidents involving the use of force. Police managers did not know with any certainty the nature or the extent of force used by their officers and this void left managers without adequate information to make decisions about policies, training, supervision, or disciplinary action. The management of law enforcement agencies increasingly depends on data-driven decisions. As a consequence, efforts to collect information on high-risk and high-profile situations have increased. However, many questions remain about the quality of the information collected: What is collected? How is it collected? How is it used? This chapter focuses on these questions. First, we look at the use-of-force information collected. Second, we examine the various methods used by agencies to collect the information. Finally, we discuss the numerous ways agencies can benefit from collecting and utilizing these data.

Official records are normally perceived as self-serving documents that tend to justify rather than incriminate. Observational research is both time consuming and costly. Some problems in using these sources include reporting biases (agencies are hesitant to disseminate sensitive information that might expose a poor record), changes in reporting methods over time, miscounting or misclassifying information, problematic access to incriminating official records, and missing data. Despite these problems, conducting a secondary analysis on official use-of-force forms is convenient and inexpensive compared to other methods of analysis.

Official records produce large numbers of reports, which are necessary for an accurate representation when researching events such as the use of force by the police (Adams, 1995). Further, they provide a convenient and efficient description of official police information. As mentioned previously, there are certain limitations to using official governmental records. Police managers often have different interests than researchers, and therefore collect only the types of information relevant to, or important for, their own ends. This often results in inadequate data for research purposes.

One of the problems with the collection of force data is shown in the study Police Pursuits and the Use of Force, on the use of force after a vehicular pursuit (Alpert, Kenney, and Dunham, 1997). In that study, officers, supervisors, and suspects were asked to estimate the number of pursuits that ended with officers using force and excessive force. Interestingly, officers estimated that 53 percent of all pursuits ended with force being used, whereas supervisors estimated that 47 percent of pursuits ended with the use of force. The suspects who had fled from the police reported that 46 percent of pursuits involved police use of force after the chase ended. These estimates are in stark contrast to the official forms, which showed that of more than 1,200 chases, force was used to apprehend suspects in only 17 percent of the chases. Similarly, when asked to estimate the number of pursuits that resulted in the use of excessive force, officers reported 13 percent, supervisors 11 percent, and suspects 14 percent. Predictably, the official reports indicated that excessive force was not used at all. While there are reasons that might explain some differences in the reporting of force and levels of force, none can explain the difference between these estimates and the official police record. This example demonstrates the problems associated with using official records for research.

Perhaps the most effective and efficient method for collecting use-of-force information is to have a supervisor document all aspects of police–citizen contacts where force is used. Once called to the scene, the supervisor can record input from all involved parties, including the officer(s), suspect(s), and witness(es). Additionally, the supervisor can take photographs of any alleged damage or injuries (Alpert and Smith, 1999). This method may still

suffer from an agency bias, but will temper the officer's own bias by including observations from other parties, both involved and neutral. Reporting on use of force begins with the general incident report. Depending on the agency, there may be additional reports required to detail interactions between officers and suspects.

Incident Reports

Most police agencies require officers to complete some type of report on all incidents in which they are involved. These can range from a brief summary to a detailed description. If an officer uses force to control a suspect, she or he can mention it briefly in an incident report or go into some detail as to the specific actions taken. Incident reports can have separate sections for the use of force that may require specific information, or the reports can simply reflect what the individual officer believes to be important facts about the control of the suspect. Officers may be required to report the reason for any force used; alternatively, it may be at the officer's discretion whether to explain the choice of tactics or whether any injuries resulted. Because of the general nature of these reports and the variety of issues they encompass, it becomes difficult to isolate the specific factors surrounding the use of force. If the use of force is mentioned or an explanation of an injury is included in the incident report, the probability is that the perspective taken will justify any use of force and consequent injury to a suspect (Hunt and Manning, 1991). Incident reports may serve as a good summary of an incident, but they are not sufficient to capture the details of a violent police–citizen encounter. The use of a separate form would provide an officer with the opportunity to explain more completely the specifics surrounding the incident.

Control-of-Persons or Use-of-Force Reports

A specific form that records the details of a police–citizen encounter involving some level of force, injury, or complaint helps provide a more complete, less biased version of the facts. Use-of-force reports vary from agency to agency. These reports range from limited multiple-choice questions indicating the situation and the suspect's behavior to a detailed narrative of the events leading up to the decision to use force as well as a description of the actual force used and the suspect's resistance.

Limited Choices

A use-of-force report that offers only limited choices can assist the agency by creating a record of how often force is used, whether a weapon is used,

and how the force was applied. Of course, the form is limited by the specific choices it offers for selection. Shorter forms are easier for the reporting officer to complete; longer forms require both more detail and more time.

Detailed Descriptions

An agency could require all officers involved in some level of force to provide a description of the incident by a combination of preselected choices and a detailed narrative. The information collected by preselected response boxes could include environmental factors, type and level of force, weapon use, and injury. This time-saving tactic, along with a narrative, provides managers with a more detailed understanding of officer actions. The actions of the suspect also need to be reported as fully as possible in order to understand the nature of the interaction. This type of report implicitly views suspect control as intrinsically linked to police use of force. Agencies currently utilize variations of these forms, ranging from brief summaries to highly specific reports.

Control-of-Suspect Forms

Control-of-suspect-forms provide documentation for the actions of both the suspect and the officer. This type of report requires a detailed description of actions taken by the officer to control the suspect and actions taken by the suspect to resist the officer. Utilizing a combination of preselected categories, a narrative, and pictures of injuries, an officer can provide a detailed description of what happened during the encounter. The inclusion of a sequential account of all actions taken to control the suspect is imperative.

Who Provides the Information?

In each of the reports just noted, it is the officer who provides the information on the encounter. As Pate and Fridell (1993) explained, having the officer complete the form provides the official version of the event. This necessarily presents the officer's perspective, which may or may not be accurate. For example, if an officer were reporting the use of force and the resulting head injury of a suspect, he or she would have to justify the level of force by demonstrating that the suspect was resisting and could not be controlled without defensive tactics. The report could read, "Suspect resisted by pushing me away and taking a swing and hitting me in the head. I tackled the suspect, who hit his head on the side of a chair as he fell to the ground. The suspect was handcuffed and taken into custody without further incident. His injury was treated at the scene by paramedics." Other officers at the scene could write that they observed a scuffle and saw the suspect

and officer fall to the floor but were not in a position to see how the injury occurred. This type of report could be read by a supervisor and approved as reasonable or necessary force, resulting in an unfortunate but unavoidable injury. If, however, the suspect were able to provide his (or her) version, it might be reported that the officer shoved the suspect, tackled him, and hit him on the side of the head with his flashlight while the suspect was on the ground. Certainly, the officer has a vested interest in the "official" or "accepted" version of an incident. It is therefore important to have both parties tell their stories. Although a citizen can file a complaint against an officer, the process may be time consuming and difficult for the citizen.

Collecting information from both the officer and the suspect involved in use-of-force situations may provide agency commanders with the best understanding of the incident. Both the officer and the suspect could provide narratives. However, since the suspect would need to submit his or her narrative to an officer who has just applied excessive force, there would be little incentive to trust this procedure. Suspects may be more likely to tell their side of the story to a supervisor than to the arresting officer.

Supervisors' Control-of-Persons Reports

Perhaps the best method for agencies to collect information on situations where officers must use force to control suspects is to have a supervisor travel to the scene and interview the officer(s), suspect(s), and witness(es). The supervisor can take photographs if there is a complaint of an injury, whether visible or not. The forms can combine preselected categories to gather information on demographics, the degree and the type of force used, whether weapons were used, and any other information considered relevant. For example, the Miami-Dade Supervisor's Report of Use of Force to Control requires information on the suspect's race, ethnicity, disease, incurred injury, treatment received, any impairment the suspect may have had at the time of arrest, observed behavior, and level of resistance encountered by the arresting officer; information on the officer includes the level and the type of force used.

This method requires the supervisor to write a sequential account of all relevant actions, including the original call or observation, the officer's and suspect's behavior, what caused the suspect to resist, the level and type of resistance, and the level and nature of force used. Information on any complaint of injury, actual injury, and consequent treatment is also included in the report. The supervisor must detail the sequential ordering of who did what to whom, why, and what the result was. A comprehensive interview requires that supervisors ask officers and suspects a series of questions. It is critical for the supervisor to understand that her or his job is to capture the stories provided by the parties, not to justify the officer's actions or to argue

with the suspect. The actions and demeanor of the supervisor can deflect predisposed negative perceptions of the suspect. In some cases, an officer's version of the facts will differ from that of the suspect. Reporting the information from the interview provides the agency with statistical information on the extent and degree of use of force, environmental factors, and suspect resistance. It also allows researchers to investigate aspects of departmental custom and practice that govern officers' use of force (Alpert and Dunham, 1997).

Reliable information allows an agency to track the use of force by an officer in conjunction with the officer's assignment, length of service, ethnicity, gender, or any other available variables. Similarly, the use of force can be tracked in conjunction with the suspect's level of resistance, personal characteristics, or any other known variables. Accurate information is an essential management tool. Information about the behavior of officers can indicate the need for training or modifications to policy.

It is important for departments to collect this information because the police have been accorded the considerable power of using force to control suspects and maintain order. As the U.S. Commission on Civil Rights stated:

> Police officers have awesome powers. They perform their duties under hazardous conditions and with the vigilant public eye on them. Police officers are permitted only a small margin of error in judgment under conditions that impose high degrees of physical and mental stress. Their general responsibility to preserve the peace and enforce the law carries with it the power to arrest and to use force, even deadly force. It is essential, therefore, that these sweeping powers be subject to constant scrutiny to ensure that they are not abused. (United States Commission on Civil Rights, 1981:v)

Surprisingly, there are no legal requirements for an agency to maintain records that would enable them to measure and evaluate the nature and extent with which force is used. Consequently, many agencies do not keep information on the application of force. This has led researchers to base their work on a limited number of agencies that keep proper data and that have allowed them to access, review, and analyze that data. If agencies collected accurate information, more reliable solutions to the vital issue of use of force could be found. This information should include the series of events leading up to the encounter, a sequential ordering of actions that occurred during the encounter, their effects, and also a description of the investigation after the encounter. Once gathered, these data could be used by police agencies to understand and manage the use of force by their officers.

The methods used by agencies range from a simple explanation by the officer to a comprehensive report by an uninvolved supervisor. Whatever the method chosen, there can be little dispute that when force is used, information describing the how, what, who, and why should be reported (preferably

from the points of view of officers, suspects, and witnesses). Although the simple method of an officer's version provides important information, it is subject to reporting bias and intentional error. The most appropriate method used by agencies is the model used by the Miami-Dade Police Department. The method of having a supervisor write a report based on interviews with participants and witnesses provides a more objective overview. While this method has its potential problems, it allows for several versions of the incident as experienced and observed by those involved. Reporting suspect and witness versions (if available) of the encounter is a critical component.

Once agencies begin to systematically collect and analyze their use-of-force data, researchers will be able to develop theoretical models of police behavior, statistical models to test those theories, and practical information to assist agencies in developing or altering their existing training regimens and policies. Unless and until police agencies take the initiative to collect this important information, police managers and researchers must rely on a limited number of agencies that are willing to have their records opened and scrutinized. Findings and conclusions from studies of progressive departments have limited generalizability.

Observational Research: Observations of Police Behavior by Researchers

Another technique for determining the levels of police use of force and citizen resistance is observational research. Observational studies provide detailed information from police–citizen contacts that may not be available from other methods of research (Mastrofski et al., 1998). While official records may be biased toward a police officer's viewpoint and citizen complaints may be biased toward the citizen's perception, observational studies provide the perspective of an impartial third party (one hopes a trained observer).

Some of the earliest empirical studies of police use of force placed researchers in the field to observe firsthand the nature of police–citizen encounters in street-level situations. In the summer of 1966, Reiss used field researchers to observe police–citizen encounters in Boston, Chicago, and Washington, D.C. His researchers found that police used force in only 44 of the 1,565 encounters observed (Reiss, 1971a). Worden's (1995) reanalysis of the Police Services Study data from the late 1970s indicates that officers used force in only 59 of 5,688 (1%) encounters between police and citizens as observed in twenty-four police departments in three metropolitan areas. Similarly, Bayley and Garofalo's (1989) study of police in New York City uncovered only 36 incidents involving the use of physical force by the police of the 1,059 police–citizen as encounters observed.

The low rate of police use of force found in these studies demonstrates the inefficiency of using field observation to study police use of force. Researchers can spend days observing before witnessing an encounter that involves the use of force. It is also possible that police officers will act differently in the presence of a civilian observer whose stated purpose is to make a detailed record of an officer's actions for others to study. Although some researchers have attempted to minimize this problem (Reiss, 1971b; Worden, 1995) it seems clear that reactivity (Hagan, 1997) will most likely occur in hostile encounters between police and citizens where no other witnesses are present, a fact that partially undermines the validity of this method of research.

Reiss's landmark observational study of police in 1966 included data on excessive force. Of the forty-four observed incidents where police used force, the field observers classified thirty-seven of them as involving excessive force (Reiss, 1968:12–14). The observers used the following criteria to determine whether the force used was excessive:

> If a policeman physically assaulted a citizen and then failed to make an arrest; proper use involves an arrest.
> If the citizen being arrested did not, by word or deed, resist the policeman; force should be used only if necessary to make the arrest.
> If the policeman, even though there was resistance to the arrest, could easily have restrained the citizen in other ways.
> If a large number of policemen were present and could have assisted in subduing the citizen in the station, in lockup, and in the interrogation rooms.
> If an offender was handcuffed and made no attempt to flee or offer violent resistance.
> If the citizen resisted arrest, but the use of force continued even after the citizen was subdued.

In his reanalysis of the Reiss data, Friedrich (1980) used the judgment of the original *coders* rather than that of the original observers to gauge the extent of excessive force. The coders labeled force as excessive if (1) it was not required to make an arrest or (2) it was not required for self-defense. Of the 1,565 encounters where police regarded citizens as offenders, the coders found 28 incidents (1.8 percent) involved the use of excessive force.

Determining how frequently police use excessive force necessarily depends on how "excessive" is defined. For example, the figures reported by Reiss (forty-four instances of excessive force) are probably higher than the figures reported by Friedrich (twenty-eight instances of excessive force) because Reiss's observers used a broader definition of excessive force than his coders did. As many researchers and police officials have noted, excessive force is difficult to define and largely depends on the idiosyncrasies

of a given police–citizen encounter (Adams, 1995; Klockars, 1995; Worden, 1995; Alpert and Smith, 1994).

Notwithstanding the difficulty in precisely defining excessive force, the definitions used by both the observers and the coders in the Reiss study are unsound and reflect neither the realities of police work nor the current legal and policy standards for what amounts to excessive force. As Klockars (1995) pointed out, police sometimes use force quite appropriately against citizens without arresting them. Consequently, labeling force as excessive if it did not occur in conjunction with an arrest (as the observers' first criterion does) may overstate what amounts to excessive force. However, the officer could have used force to defend himself or herself (one of the criteria used by the coders), yet the force could have been more extreme than was reasonably necessary under the circumstances. Under the prevailing legal standard of reasonableness, such force would be excessive, yet it may not have been labeled as such by Reiss's coders.

Like the Reiss study, the Police Services Study also contains data on the use of excessive force. Of the fifty-nine recorded instances of force used by the police in that study, observers categorized twenty-three of the incidents as excessive. In deciding whether the force used was reasonable or excessive, the observers were apparently told to label force as excessive if the officer was "kicking ass" (Worden, 1995). This definition is patently dubious and undermines any conclusions that might be drawn from the study about the prevalence of the use of excessive force.

The major problems with field research are its combined expense and inefficiency. Observational studies can produce comprehensive and detailed data on police–citizen encounters, but are not likely to include many cases of physical force. It could take several hundred hours of observation to follow and measure a rare event such as the use of force. Sykes and Brent (1983) conducted one of the most complex studies of police–citizen encounters. Their units of analysis included encounters and "utterances." They were not interested in the force itself, but did look at controlling and resisting actions during the encounters. Coercive tactics were rarely used and only after other attempts at control had been attempted. David Bayley (1986) also examined the interactional process of police–citizen encounters. He did not specifically report instances of physical force, but did conclude that an initial coercive approach to an encounter by a police officer would likely lead to a more coercive outcome.

Another limitation of this type of data is that observations from one agency likely are not comparable to data from other agencies. When studying the use of force, observational studies tend to concentrate on high-risk precincts, high-risk shifts, and high-risk seasons of the year (Adams, 1995:96). Obviously, it is the goal of the researcher to observe as many varied events or contacts as possible. For example, when Bayley and Garafolo

(1989) performed field research to study potentially violent encounters between the police and the general public, they admitted that their findings were not generally applicable to all encounters because they focused their observations on the busiest shifts and selected three precincts that had the most calls for service. Terrill (2003), Terrill and Mastrofski (2002), and Mastrofski, Reisig, and McCluskey (2002) reported observations on 3,130 police–citizen encounters from the Project on Policing Neighborhoods (POPN). This effort has arguably produced the most comprehensive data set on police–citizen interactions. However, levels of force beyond a "firm grip" were observed only in 2.4 percent of the encounters.

Mastrofski et al. (2002) used the POPN data set to look at police disrespect directed at citizens. The researchers concluded that the suspects' behaviors and several characteristics (gender, age, social class) were the most powerful predictors of police disrespect. Through observational research, they were able to show that unprovoked disrespect on the part of the police is rare (4 percent), but accounts for almost one-half of the observed discourtesy (Mastrofski et al., 2002:544).

Citizen Complaints and Attitudes

Records of citizen complaint are another source of information on police use of force. Paul Chevigny (1969), in a study of the patterns of police abuse in New York City, found that citizen complaints of excessive use of force constituted a substantial proportion of all complaints filed. However, he found that only a small proportion of the complaints were substantiated. This low substantiation rate has been attributed to many factors, including investigative effort, frivolous complaints, and the absence of witnesses (Adams, 1995).

Winick (1987) found that one of every three respondents who claimed to be a victim of excessive use of force stated they filed a complaint, which translates into a nonreporting rate of 67 percent. When citizen records are examined for legitimacy, the results vary significantly. In a survey of thirty-six cities with populations greater than 250,000, Heaphy (1978) reported that the percentage of substantiated complaints ranged from 3 percent to 67 percent. Some researchers have compared the rates of force to the number of officers employed by a department undertaking specific types of assignments (Adams, 1995). The New York City Police Department (1986) survey found that ten complaints of excessive use of force are filed per 100 officers per year, while other researchers have reported somewhat higher numbers (Croft and Austin, 1987). The conclusion is that officers in certain cities and departments will have different rates of complaint, attributable to variable and often unique factors, such as the type of community, the particular agency, and individual characteristics. Pate and Fridell (1993) found that

complaints concerning excessive use of force differed by type of agency. For example, municipal agencies averaged 4.8 complaints per 100 sworn officers, whereas state agencies averaged 1.6 complaints per 100 officers.

Departmental concern over bad publicity influences both the complaint process and the number of complaints received. This influence casts some doubt on the veracity of official figures. Strategies to discourage citizen complaints generally involve some method of coercion or intimidation. Perhaps the most frequent method employed to discourage complaints is to make the complaint-filing process difficult. This is easily accomplished by limiting the times and places a complaint can be filed. Another tactic is a form of stonewalling. If citizens do not know what procedures to follow, the number of complaints is minimal (Adams, 1995). The citizen complaint process has been criticized by civil rights groups for failure to investigate minority complaints and for failure to discipline officers receiving legitimate complaints (Walker, 2001). Official data on citizen complaints provide some evidence to corroborate these accusations. Pate and Fridell (1993) found that African Americans were less likely to have their complaints substantiated than were white complainants. Although African Americans filed 42 percent of all complaints with municipal police departments, only 27 percent of those complaints were substantiated; whites filed 41 percent of all complaints and had 56 percent substantiated. Other minority groups, such as Hispanics, are underrepresented in complaints against the police in relation to their percentage of the population.

Citizen Review

To combat these concerns, some police departments have created citizen complaint review procedures. These procedures have been designed to make the police more accountable to the public. Consequently, they have become a very important aspect of policing (Walker, 2001; Walker and Kreisel, 1997). The debate over the appropriateness of establishing citizen review has become increasingly heated. Advocates argue it is a more independent and effective way to investigate complaints than internal review, whereas opponents argue that nonsworn individuals are not qualified to evaluate police practices and that their intervention undermines the autonomy of law enforcement agencies (Walker, 2001).

Walker and Kreisel (1997) gave four arguments in support of external review procedures. First, citizen involvement in the complaint process will produce more objective and thorough investigations. Second, citizen involvement is a deterrent (specific and general) against police misconduct. Third, it leads to an increased rate of sustained complaints and punishment for guilty officers. Finally, there is increased satisfaction for both complainants and the public.

The different methods used by law enforcement agencies to implement their review procedures can obstruct true citizen autonomy and impartiality. In an analysis of sixty-five citizen review procedures, Walker and Kreisel (1997) found that citizens conducted the initial fact-finding investigation in 34 percent of all review procedures, provided input in 46 percent, and had a monitoring or auditing role in 20 percent. In one recent example, The Prince George's County (Maryland) Police Department's Citizen Complaint Oversight Panel examined a sample of ninety complaints. This panel does not have the power to interview officers or suspects or to gather facts; it simply reviews the investigation conducted by the police agency. Eighty percent of the cases it reviewed alleged the use of excessive force and it disagreed with the findings of the internal affairs investigation in sixteen cases (18 percent). If the panel had the ability to interview the actors or to gather information independently, the number of disagreements might have dramatically increased. To make this type of data more useful to researchers, it is essential to compare results between citizen review panels and police investigations and to examine variations in implementing the findings from citizen review procedures.

Citizen Surveys

Citizen surveys can give detailed information on use-of-force incidents from the citizen's perspective. The two most common types of citizen surveys are victim surveys and public opinion polls. The Census Bureau conducts annual criminal victimization surveys for the U.S. Department of Justice's Bureau of Justice Statistics (BJS). While costly, these surveys provide useful data at the national and local levels. Recently, the National Crime Victimization Survey (NCVS) included the Police–Public Contact Survey as a supplement, contributing additional data on police use of force. The survey asked questions about the nature and extent of citizen contacts with police during 1996 (Greenfield, Lanagan, and Smith, 1999). One of the survey questions asked whether the police had used force against the respondent. Only fourteen respondents reported that they had been the recipients of police use of force. The Bureau of Justice Statistics extrapolated this number to the population and projected that 500,000 people were victims of such force in the past year.[1] While this figure contains a large margin of error due to a small response rate, it does provide a rough estimate of the considerable number of citizens who have had force used on them by the police.

The Bureau of Justice Statistics conducted a second Police–Public Contact Survey (Langan et al., 2001). This survey was conducted at the end of

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[1] When handcuffing was included in the BJS definition of force, the number of people increased to 1.2 million (Greenfeld, Langan, & Smith, 1999).

1999 using a sample almost fifteen times as large as the 1996 survey. The results were almost identical. The estimate was that 1 in 500 persons, or approximately 422,000 persons aged sixteen years or older, were involved in a contact with the police that involved the use or threat of force. A similar percentage of blacks and Hispanics reported use of force, whereas a smaller percentage of white citizens experienced use of force.

According to the Bureau of Justice Statistics' data, approximately 20 percent of those who had force used against them reported sustaining injuries. Fifty-seven percent of the citizens admitted arguing, disobeying, or resisting the officer or stated that they were under the influence of alcohol or drugs at the time of the encounter. About 75 percent of those who were involved in an incident involving the use of force indicated that the police used excessive force (although excessive was not defined). There were no ethnic differences among those who reported that the force used against them was excessive. More than 90 percent of those who were involved in an incident where force was used reported that the police acted improperly.

One major limitation of the 1996 survey was the operational definition of force the researchers employed. The specific wording of the question asked respondents whether police used or *threatened to use* force against them, without specifying or defining what constitutes force (Alpert and Smith, 1999). The 1999 survey used the following definition of force:

> Force includes contacts in which the police officer pushed, grabbed, kicked or hit the citizen. Hitting was defined as striking the citizen with a hand or an object held in the officer's hand. Included in the definition of force were police dog bites, spray with pepper spray or a chemical and a firearm pointed in the citizen's direction. Also included was the threat to carry out any of these types of force. (Langan et al., 2001:2)

It is interesting to note that the results of the two surveys were nearly identical. This is true even though the 1999 definition is much clearer concerning what does or does not constitute the use of force. One obvious question is whether one or the other of the surveys is more reliable. For example, given a clearer definition of what is and is not force, would a larger or smaller number of respondents have confirmed that the police had used force against them?

In addition to the wording of questions, recall error is a potentially serious problem in police use-of-force surveys. For example, Winick (1987) found that 7 percent of those who claimed to have experienced or witnessed the excessive use of force said that deadly force was involved. When these subjects were reinterviewed, they reported that none of the incidents involved a shooting or police misuse of a weapon. Clearly, there is a concern that the nature of police–citizen conflict situations leads to recall distortion and the telescoping of events. This distortion may also be subject to media

influence, given that the media tends to give extensive coverage to abhorrent but statistically rare events. This high-profile reporting tends to fuel the perception that the police use excessive force to a far greater degree than they actually do. Misrepresentation of events is also an issue when gathering data in volatile situations: Citizens who have been subject to a negative interaction with the police may be more likely to lie, skew events in their favor, or recall events with an unintentional bias.

Despite their imperfections, surveys are without question a useful tool in ascertaining the prevalence of the use of force in police–citizen interactions. Their census-like mechanisms are somewhat simplistic, but they do provide a broad and representative overview of the use of force, and on a larger scale than would otherwise be possible. They also have the added benefit of anonymity, which encourages honest responses. With this in mind, and with the aim of supplementing our knowledge of what we know about police use of force outlined in this chapter, we include an explanation and synthesis of the National Survey of the Use of Force conducted by the Police Executive Research Forum (PERF) in 1998.

However, before we review PERF's survey, we address several factors that affect how force is used and how incidents involving the use of force are recorded. These factors are not covered in order of importance, but are approached in the most logical order possible given their disparate nature.

Additional Factors That Affect How Force Is Used and Recorded

Minorities: The Problem of Perception

The perception that minorities are subjected to more force than other groups, a view that is once again fuelled by media coverage, also has great currency. A Gallup poll (Gallup, 1991) found that 5 percent of all respondents and 9 percent of minority respondents said they had been physically abused or mistreated by the police. The poll also found that 20 percent of respondents and 30 percent of minority respondents reported that they knew someone who had been physically abused by the police.

Unfortunately, only limited research has been conducted on the ethnic matches of officers and citizens and the results have been mixed. Additionally, research findings on this subject have been inconsistent when race has been used as a variable. Adams (1995, 1999) reported that approximately 3 percent of *all* suspects (irrespective of their own or the officer's race or ethnicity) experienced force used by the police. In Garner et al.'s six-site study (Garner and Maxwell, 1999), race was found to be an inconsistent predictor of the use of force, with only one site and one ethnic match proving to be a predictor of force (white officers and Hispanic suspects in San Diego County). Mastrofski, Snipes, and Supina (1996) found that compliance rates

to police orders were linked to ethnicity. In fact, compliance rates were found to be highest between white officers and minority citizens, and lowest between minority officers and white citizens. Conversely, Mastrofski et al. (1996) found that people from low socioeconomic backgrounds were least inclined to obey the police. Taft (1991) also noted significant problems with compliance for the police in these locales. The studies reported in this book are also inconsistent. The research conducted in Miami-Dade contains findings similar to those from these other studies, whereas the results from Prince George's County indicate that race does affect the use of force. Clearly, research on ethnicity and police use of force is a difficult undertaking, but is an important issue that needs further exploration (Dunham and Alpert, 2004). What does remain certain is the gulf between reality and perception, irrespective of whether race and ethnicity affect the use of force by the police. When compared to the Gallup polls, these data demonstrate that members of minority groups tend to hold more negative views of the police than white citizens, a finding that goes some way to explaining the resistance and hostility often faced by police in minority communities.

Self-Incrimination: Problems of Perception

Negative public perception of the police can have an effect on officers' suspicion and can affect both their reporting of incidents and the external reporting of the results from observational surveys and citizen complaints. The tendency of officers to be suspicious or even misleading can affect data, as can the fear of litigation. Protecting officer anonymity and institutional integrity during the research process is important in overcoming this difficulty, although not at the expense of police accountability.

Over a two-week period, Garner et al. (1996) surveyed police officers in Phoenix, Arizona, immediately following arrests. Their work captured variations in how officers handled encounters as well as the resistance provided by citizens. Their analyses recorded the severity of actions of both officers and citizens. They found that police used force infrequently, that physical resistance by suspects was even less frequent, and that the best predictor of police use of force was suspect resistance. The survey was designed to capture a wide range of data on the nature of force used in arrest situations, including the characteristics of the officers and suspects, the events precipitating use of force, and the situational/environmental aspects of the incident. The researchers found that officers used force in approximately 22 percent of all arrests made during the two-week period.

What the Police Think with Regard to the Use of Force

The Police Foundation (Weisburd et al., 1998, 2001) conducted a lengthy and sophisticated national survey of police officers concerning their

attitudes and opinions toward police use of force. The survey included al-
most 1,000 officers from more than 100 agencies, using a proportional-to-
size (PPS) sampling method. Their results are summarized as follows:

> Our survey shows that most police officers in the United States disapprove of
> the use of excessive force. Nonetheless, a substantial minority believes that
> they should be permitted to use more force than the law currently permits,
> and they consider it acceptable to sometimes use more force than permitted
> by the laws that govern them. . . . Presented with someone who physically as-
> saults an officer, almost 25% felt that it is sometimes acceptable to use more
> force than legally allowable to control a person in that situation . . . more than
> four out of ten, tell us that always following the rules is not compatible with
> getting the job done. And when asked whether police officers should be al-
> lowed to use physical force in response to verbal abuse, a very small number,
> only 7% of officers in the weighted sample, thought this clear violation of cur-
> rent norms should be allowed. (Weisburd et al., 1998:19–20, 21–22; Weisburd
> et al., 2001:13–14)

A majority of officers feel that it is not unusual for police officers to turn
a "blind eye" to improper conduct by other officers. Even when it comes
to reporting serious criminal violations, a surprising six in ten report that
police officers do not always report serious criminal violations involving
abuse of power by fellow officers. While this research did not attempt to
measure officer use of excessive force, the officer attitudes and opinions
clearly demonstrate that the use of excessive force is both common and
generally accepted by the officers as likely and foreseeable (Weisburd et al.,
2001).

Prior Research on Police Use of Force

The research on incidents of police use of force indicates that it is a rare
occurrence and that a small number of officers use force disproportionate to
other officers (Worden and Catlin, 2002). Studies conducted from the 1960s
to the 1990s report similar findings. In analyzing data from eight precincts
in Boston, Chicago, and Washington, D.C., Reiss (1971a) estimated that
approximately 9 percent of offenders are handled with force. These same
data were reanalyzed by Friedrich (1980), who reported that approximately
5 percent of encounters with suspected offenders involved some level of
force. Bayley and Garofalo (1989) observed force in approximately 8 percent
of the potentially violent situations in their study, and Fyfe (1995) reported
10 percent of the encounters observed by his research team involved force.

The Role of Definitions

While it is clear that the use of force by police officers is a rare occurrence,
it is important to note that the definitions and reporting procedures can

influence results dramatically. For example, Bayley and Garofalo (1987) reported that the vast majority (84 percent) of incidents involving the use of force included only grabs, pushes, and shoves; injuries were infrequent. In fact, they concluded, "Violence, more accurately conflict during patrol encounters, was very rare" (p. B-21) and most of it was verbal. However, Croft and Austin (1987) reported that more than 35 percent of police use of force results in injury to a citizen, although it may well be that these use-of-force reports were filed only for "serious" situations.

Recently, Garner et al. (2002) analyzed the prior research on police use of force. Their comprehensive review emphasized the importance of how force was measured and the role of suspect resistance. Adams (1995), in his review of the literature, made similar observations. First, he realized that "observational research suggests that police use of force occurs at least twice as often as suggested by official use of force reports . . . because they provide for a more generous definition of force than that used by police to trigger the filing of a use of force report" (p. 71). Second, he confirmed what the police have known for years: The use of force is an infrequent event.

Conceptual Models for the Use of Force: A Brief History

The research literature includes a rich history on the explanation of the use of force by the police (Garner et al., 2002; Worden and Catlin, 2002; Adams, 1995). Several conceptual models have been used to explain police use of force. One of the most popular paradigms used to formulate explanations of the use of force comes directly from the historical roots of policing. It contends that police have been responsible for enforcing the laws (constable), keeping the peace (watch), and controlling minorities (slave patrol). This third function was created "to guard against slave revolts and capture runaway slaves . . . ," and it has been argued that, "In some respects, the slave patrols were the first modern police forces in this country" (Walker, 1992:6).

Austin Turk (1969) noted that the formation of authority relationships is inevitable and that the more an individual's cultural norms do not match those of the authority figure, the greater is the likelihood of conflict. Factors Turk takes into account include *congruence*, agreement between norms (or rules) and individual behavior; *social organization*, the setting in which the interaction occurs; and *sophistication*, the ability to manipulate the other actor' s behavior. A hypothesis that links the three concepts suggests that relative norms of deference in social interactions influence the use and level of force by the police.

Lanza-Kaduce and Greenleaf (1994) incorporated Turk's concepts into their explanation of police–citizen conflicts. They suggested that "members of groups that are most unlike the dominant white middle class, whose norms are reflected most clearly in law, are most likely to be in conflict with legal authorities" (p. 613). In this context, conflict is a proxy term for

force. Social scientists research the indicators of what Turk calls cultural differences: race or ethnic background, class or economic status, age, and native language (English or other). All of these indicators are relevant for our investigation into police–citizen contacts.

Sykes and Clark (1975) first developed the theory of deference exchange. This explains police–citizen interactions from a normative and interpersonal construct. It is an excellent vehicle with which to study the interactive processes between police use of force and suspect resistance.

The deference-exchange theory is based on Goffman's (1959, 1961) work. When the police encounter a citizen as a suspect, there is an expectation, by officers and the general public, of deference. If suspects show deference, they reestablish themselves as individuals willing to be part of the moral and legal community. By refusing to show deference, suspects present actions that openly reject the principles of the moral and legal community. Because the normative relationship is asymmetrical, deference should be expressed differently downward than upward, with the higher-status actor not expected to show the same level of response as the lower-status actor. The obligation on the part of the citizen to show deference is also proportionate to the level of offense. When the citizen has been transformed into a suspect, the asymmetry will be greater than if the citizen is not a suspect. If the suspect decides to deliberately disregard the orders of the officer, fails to show deference, and actively resists the officer, then the officer's response will be more asymmetrical and perhaps aggressive.

Sykes and Clark (1975) took these ideas from Goffman and set forth their framework for studying all police–citizen interactions:

> We wish to propose an explanation of police behavior based on a sociological (normative) and interpersonal construct rather that on what is more essentially a psychological (working personality or prejudice) construct. Police behavior must be explained in terms of the rules which order their relations with civilians and which are usually mutually acknowledged by both officers and civilians. Among these rules we posit the influence of an interpersonal norm governing police–civilian relations which we shall term an "asymmetrical status norm" (after Brown, 1965) and which is evident in many relations between those of unequal status in addition to police and citizens. Police are of higher status than many citizens with whom they interact. . . . We hypothesize then that this difference in status influences the flow of deference so that it is expected that it will be expressed differently downward or upward. This difference in the flow of deference also explains many otherwise anomalous facets of the police–civilian relationship. (Sykes and Clark, 1975:586)

The deference-exchange theory provides an appropriate conceptual framework in which to study police–citizen contacts that result in the use of force. As an incident unfolds, even a reasonable officer will expect deference, but this expectation can be interpreted by a suspect as an expression of

"police" superiority. In turn, a suspect's refusal to express deference may be interpreted by the officer as a rejection of the moral and social fabric and of the officer's symbolic status. Because the actors are not responding as expected in the encounter, the defiance between them escalates. As both actors discredit each other, they exchange roles as threatening and threatened. Actions such as a "look," a furtive movement, a gesture, or any other difficult-to-measure behavior may displace normative responses. Suspect demeanor is therefore an important indicator of relative deference.

Demeanor has been a widely studied concept in connection with police use of force. In 1964, Piliavin and Briar first reported a link between the arrest of juvenile suspects and their demeanor. Results from more recent research have shown that the police use force more often when citizens become antagonistic and defiant as than in situations when suspects are cooperative. However, the conclusions from this research remain clouded due to measurement, operational, and observational issues. In the Metro-Dade Police Department observational study, Klinger (1994) found that hostile suspects were more likely to be arrested because they were more likely to commit crimes against the police and in the presence of police, not because their demeanor indicated a lack of deference for police authority. However, he limited the definition of demeanor to legal conduct. In a subsequent analysis of the same data, Klinger (1996) reported, "The basic logistic analyses conducted show an increased likelihood of arrest when citizens display extreme hostility, which suggests that displays of hostility may independently increase the odds of arrest once they pass a severity threshold" (p. 75).

Other researchers have taken different approaches in the operational and analytical ways they assess demeanor in police–citizen contacts. Lundman (1994) reanalyzed data from the Midwest City Police–Citizen Encounters Study and limited his measurement of demeanor to spoken words. He concluded that, "demeanor was consistently linked with arrest, but statistical significance was clearly a function of representation" (p. 649). Worden and Shepard (1996) noted, "previous research had shown that disrespectful suspect demeanor was an important theoretical construct in explaining use of force but there was little agreement on behaviors that constituted disrespect" (p. 102). In an exhaustive secondary analysis from four studies based on the Police Services Study data, the researchers concluded that half of the citizens who were on the receiving end of police use of force were under the influence of drugs or alcohol, and that half of those displayed a hostile or antagonistic demeanor. These researchers provided evidence that suspect actions in their sample of observations are extremely important in explaining the use of force. Mastrofski et al. (1996) reported results from observations of police–citizen contacts in Richmond, Virginia, and found that higher levels of irrationality among suspects are associated with lower levels of compliance to the police directives. They also reported that the

number of officers present and the level of aggressive behavior resulted in use of force when the problem was serious and the suspects were physically aggressive or attempting to flee. Kavanagh (1997) interviewed officers in New York and New Jersey who were assigned to the Port Authority Bus Terminal. He reported that "arrestee disrespect" was the most powerful variable related to police citizen violence. A recent study that reanalyzed the data collected by Garner et al. (1996) reported that, "Two key predictors for an officer using a higher level of force were an angry or aggressive demeanor" (Crawford and Burns, 1998:57).

While the findings point toward the importance of demeanor, their significance is challenged by methodological concerns. Future research on demeanor must specify the "severity threshold" suggested by Klinger (1996). That is, behavior that distinguishes between "good" and "bad" demeanor must be specified and measurable. These measures of demeanor must include actions and perceptions that may be "legal" but are seen to agitate, anger, or annoy the officer. Relevant actions (or inactions) could include tone of voice, refusal to answer a question, furtive gestures, and "a look in the eyes." These methodological challenges may stymie research on demeanor or, alternatively, move it to a more uniform standard of measurement.

The Move toward Better Data

The most consistent problems in conducting empirical studies on police use of force involve the difficulties in obtaining information on the use of force, its validity, and the ancillary difficulty involved in interpreting the data (Pate and Fridell, 1993; Adams, 1995; Klockars, 1995). The most pressing problem is inadequate and incomplete record keeping by the police. Not all cases involving the use-of-force are recorded by the police or reported by citizens, and most agencies that do record use-of-force information generally require reports from the officer involved only if the confrontation results in injuries or verbal complaints (from suspects and/or citizens). For example, the Virginia Association of Chiefs of Police (VACP, 1994) initiated a Use of Force Survey for its member agencies. While they reported a meager 23 percent response rate for 1993, they were encouraged by the responses of the fifty-eight agencies that returned the survey instruments.

The International Association of Chiefs of Police (IACP) has continued the efforts of the VACP and expanded the data collection (Henriquez, 1999; International Association of Chiefs of Police, 2002). The IACP has simplified the data-collection effort by requesting cooperation and providing a software package to the police departments that volunteer their data. In addition, the IACP has guaranteed anonymity to the agencies. It is encouraging that more than 4,000 agencies have requested the software, which is provided at no cost. The IACP database includes information from 564

agencies. More than 177,000 incidents were reported between 1995 and 2001. Using these data, the IACP reported that force was used 3.6 times per 100,000 calls for service in 1999 (the most recent year that complete data are available). As this effort matures and more agencies contribute data, a more complete picture of police use of force in America will emerge. The IACP project is an important step toward sensitizing police administrators to the importance of collecting and analyzing use-of-force data. While this effort is important, it does depend on the willingness of police administrators to collect and disseminate the data. Of course, it relies also on the veracity of the information provided. Although the IACP has incorporated safeguards (anonymity) for the agencies, many remain reluctant to cooperate in such a project.

Individual agencies and associations are collecting the majority of data. Of course, many agencies that collect data only require minimal information and others will not share their data with researchers. This discouraging trend prevails throughout the country and has been reported on by Pate and Fridell (1993). Fortunately, there are exceptions to the rule. Some larger departments not only maintain use-of-force statistics, but would welcome an analysis of the information.

Kenney and Alpert (1997) conducted a survey that asked respondents about the availability of use-of-force data. This study, discussed in detail below, showed that the smaller the agency, the less likely it is to have use of force information. Use-of-force data were not available in 68 percent of agencies with fewer than 100 officers; only 35 percent of agencies with 501 to 2,500 officers did not have data.

It is encouraging that membership organizations such as the IACP are creating databases and soliciting use-of-force data from their members. It remains to be seen whether the agencies will cooperate and submit their data. Unless and until there is full cooperation from police agencies in both the collection and the dissemination of use-of-force data, a clear picture will not be possible. The quality of the data available is a second critical question. Even if agencies report their information to a repository or allow a researcher to analyze the data, it is not clear what the quality of that information would be.

Information on the suspects involved in force situations is also difficult to capture. Demographic data are available on arrests and use-of-force forms; however, information on suspect employment, economic standing, or social class is problematic at best. Without completing lengthy questionnaires, it is difficult to determine the economic status of an individual. Most indicators of class have been proxy measures of some sort. Additionally, researchers have relied on subjective proxy measures such as clothing, language, cars, residence, and employment among others. Theoretically, suspects from the lower class are likely to be treated more harshly than those from the middle

and the upper class. However, Terrill and Mastrofski (2002) found minimal differences in levels of physical force used on citizens from different economic strata.

Before embarking on an examination of the use of force in selected police departments, we examine in detail the data from the National Survey on the Use of Force conducted by the Police Executive Forum (Alpert et al., 2002). Not only will the data provide an overview of the current trends and practices in responding agencies, it will serve to underscore many of the observations made thus far. It will also highlight the limitations of this kind of research and underscore the need for a new concurrent methodology, a need we seek to meet in Chapter 8.

The National Survey of Use of Force

Survey Goals

In conjunction with the studies that provide the data for the conclusions and conceptual framework outlined in Chapters 7 and 8, the Police Executive Research Forum in Washington, D.C., was commissioned to conduct a national mail survey of law enforcement agencies to determine the state of reporting systems regarding the nature and extent of agency use of force (or control of persons). The questions were provided to PERF, whose staff randomly selected 845 municipal and county police and sheriff's departments serving populations of 50,000 people or more from a national mailing list compiled by the International City County Managers Association (ICMA). Municipal agencies were oversampled to obtain a broader representation of police departments compared to sheriff's offices.

The survey was based on an earlier one, the National Survey of Pursuits and the Use of Force (Kenney and Alpert, 1997). This earlier survey highlighted the dearth of detailed record keeping and policies, the lack of a consistent definition of acceptable conduct and officer responsibility with regard to pursuits, and a general lack of training. Based on this information, the second survey was designed to ask law enforcement agencies about their use-of-force policies, practices, and customs.

Relevance of the Data

The resulting data permit an analysis of the policy and reporting systems by type of agency (municipal police department, county sheriff's department, county police department), size of agency (number of sworn officers); accreditation status (accredited, not accredited), collective bargaining status (rank-and-file officers represented by collective bargaining unit, not represented), and other factors.

Definition of Force

The agencies were asked to report the number of use-of-force incidents that occurred during the calendar year 1996. Force was defined as the use of physical force, chemical agent, or a weapon to control a suspect. In addition, data were collected on training programs addressing use of force and lawsuits filed for excessive force.

The Survey Instrument

The survey instrument was created in June 1998 by the project staff and pretested in four police departments: San Diego, California; Charlotte–Mecklenburg, North Carolina; Arlington County, Virginia; and Polk County, Florida. Comments were received and the appropriate revisions were made. The finalized instrument was mailed to 845 law enforcement agencies on August 20, 1998. After a closer examination of the agencies to which the survey was sent, eight sheriff nonrespondents were removed from the list because they were sheriff's department substations. Five city agencies were also removed from the sample, as the agencies had either been disbanded or merged into other agencies. Therefore, the response rate was calculated from 832 agencies.

Maximizing the Response Rate

A second wave of surveys was mailed on October 8, 1998. In a further attempt to increase response rate, phone calls were made to every nonresponding agency in the first week of December. Phone calls targeting nonresponding agencies with a PERF member as sheriff or chief of police were made at the beginning of February.

Response Rates

The response rate for police departments was 74.6 percent (362 of 485 agencies). The response rate for sheriff's offices was 60.2 percent (209 of 347 agencies). The overall response rate was 68.6 percent (571 of the 832 agencies contacted). Approximately 47 percent of the 261 nonresponding agencies were municipal police departments and 53 percent were sheriff's departments. During communication with the nonresponding agencies, 20 agencies indicated that they would not be completing the survey (9 were police departments and 11 were sheriff's agencies). The remainder of the agencies gave the impression that they would attempt to complete and return the survey (of these 241 law enforcement agencies, 114 were police departments and 127 were sheriff's agencies).

Summary of Results

Agencies were asked to report information on their use-of-force policies, reporting schemes, and general results from litigation. Because the data are at the agency level, some are missing and the measurement of the rate at which force is used has been transformed to make comparisons reasonable. The rate was computed by dividing the number of incidents (in agencies that report all use-of-force cases) by the population of the agency jurisdiction and standardizing this figure by 100,000.

Frequencies

Most agencies (97 percent) reported the existence of some type of written policy on the use of force, with only 3 percent reporting no policy whatever. Of those with written policies, only 20 percent were established prior to 1990 (the earliest being 1967), with the remaining 80 percent being implemented in the past decade (the latest came into effect in 1998). Almost one-half (49 percent) of the policies had been modified during the past two years, but a majority (56 percent) of these modified policies did not make the policies more restrictive. Some agencies that had policies on the use of force did not require any documentation when force was used. Although 83 percent of the agencies utilized a specific form to record use-of-force information, the remaining 17 percent of agencies did not. The level of force that required a reporting mechanism varied among the agencies. Fifty-five percent of the agencies indicated that reports were required for any and all levels of force including lethal, nonlethal, and intermediate weapons as well as the use of fists, hands, and feet. The remainder of the agencies (45 percent) did not collect use-of-force data on separate forms or only collected information on the use of deadly force or when the use of force caused an injury.

Specifically, 47 percent of the agencies required documentation after any use of an intermediate weapon. In addition, slightly more than one-half (51 percent) did require a use-of-force report to be completed after use of chemical agents. Some agencies (21 percent) required use-of-force reports to be completed for any incidents that resulted in a citizen complaint. Most agencies did not have policies authorizing the use of other intermediate weapons such as a taser or stun gun. Only 11 percent of all agencies authorized the use of a stun gun, and 13 percent authorized the use of a taser. In contrast, most agencies (92 percent) did authorize the use of a PR-24 or other baton. Finally, most policies regarding the use of postarrest restraints (i.e., body wraps, hog-ties, etc.) were not based on any type of continuum. The number of use-of-force/control-of-persons reports completed in 1996 ranged from a low of none to a high of slightly more than 2,400 reports. When an agency collected use-of-force data, only 60 percent used the data for a specific purpose.

Most use-of-force reports (45 percent) were completed by the officer. Two or more individuals, including the officer and a supervisor, completed a report in 28 percent of the agencies. In 10 percent of the agencies, only the supervisor filed a report. There were a small number of agencies (2 percent) that reported "other" as responsible for completing a use-of-force report.

Cross-Tabulations

The survey also provides information on the relationships among agency accreditation, use-of-force reporting systems, geographic regions, early-warning systems, and how often force is used. Sixty percent of the agencies surveyed were municipal agencies. Thirty-six percent of the agencies were sheriff's departments, and 4 percent of those surveyed were county police departments. Forty-one percent of the agencies surveyed had been sued for use of excessive force in 1996. The number of lawsuits for each agency ranged from 0 to 130. Most of the lawsuits were pending or had been settled. Since 1995, the agencies reported payouts between $550 and $18,000,000.

In addition to agency lawsuits, officers had also been sued personally. In 1996, 34 percent of agencies reported that they had officers sued for excessive use of force. The number of officer suits ranged from none to a high of 137. Most suits concerning the use of excessive force were dismissed, pending, or settled. Approximately 74 percent of these lawsuits never went to trial, although when they did, the defendant tended to lose (78 percent). The reported payouts from these lawsuits ranged from $350 to $1,750,000.

The various levels of force employed by police officers had a direct impact on the financial losses of departments. As the level of force increased, so did the compensation afforded by the courts. There appeared to be a relationship between the level of force and the average financial loss to the department. High levels of force, including the use of weapons and situations involving severe injuries, resulted in higher dollar amounts awarded by the courts or agreed to by the parties. When lower levels of force were used, police departments incurred lower average losses. Low levels of force resulted in costs of roughly $75,000. When officers used higher levels of force, losses averaged approximately $380,000. Instances in which the highest level of force (deadly force) was used had an average payment of $1,150,000.

Rates at which force was used were also compared across four different regions of the United States: the Northeast, the Midwest, the South, and the West. Rates were calculated per 100,000 citizens. In the Northeast, the average rate at which force was used was roughly 72 incidents per 100,000 citizens. In the Midwest, it was 68 incidents per 100,000 citizens. The South reported the highest rate: 90 incidents per 100,000 citizens. The West reported the lowest use-of-force rate: 50 incidents per 100,000 citizens.

The mean differences in the rates at which police use force based on whether agencies had early-warning systems (EWS) were also analyzed. Of

the agencies that reported use-of-force rates, 33 percent had an early-warning system. A negative correlation was found between the presence of an early-warning system and the average force rate per 100,000 citizens, meaning that agencies with an EWS had higher rates of force than agencies without an EWS. If an agency had an EWS, the mean rate at which force was used was 100 incidents per 100,000 citizens. When an agency was only planning to implement an EWS, the average rate of force decreased to 80 incidents per 100,000 citizens. When an agency did not have an EWS, the average rate of force was even lower, 57 incidents per 100,000 citizens.

Many of the agencies surveyed were accredited: approximately 32 percent were accredited by the Commission on the Accreditation of Law Enforcement Agencies (CALEA) and a state accreditation body accredited 25 percent. Thirty-two percent of the CALEA-accredited agencies were also accredited by their states. Almost all the agencies accredited by CALEA (94 percent) require reports on the use of force, compared to 82 percent of non-CALEA-accredited agencies. Interestingly, the data indicated that agencies in the process of CALEA accreditation had lower-than-average rates for the use of force compared to both accredited and nonaccredited agencies. CALEA-accredited agencies were found to have the highest mean rate of force, 94 incidents per 100,000 citizens. An agency in the process of CALEA accreditation had the lowest average use-of-force rate, 54 incidents per 100,000 citizens. If an agency was not accredited by CALEA, the resulting average rate at which force was used was 70 incidents per 100,000 citizens.

The Shift to an Interactive Model

The data from the national survey provide a snapshot of the information concerning force and early warning that is available from police departments. The data can be used beyond the frequencies and cross-tabulations to investigate trends and practices of the responding agencies. However, as has been indicated, surveys such as these remain limited in their scope. Their use lies in providing an overview of police use of force; however, they do not help to give a clearer perception of how and under what conditions police resort to the use of force. A considerable amount of research demonstrates how infrequently the police resort to the use of force in the execution of their duty. Unfortunately, the details of our knowledge about these situations remain limited. The interactive nature of these encounters deserves a more thoroughly developed theoretical framework and a data-collection methodology designed to respond to many unanswered questions. The following chapters address some of these concerns and focus on what we know and can learn about police use of force. Chapter 8 specifically proposes a conceptual framework that aims to provide better explanations for police–citizen interactions and the use of force.

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The Crucial Element

Finding Research Sites

RESEARCHING A HIGH-RISK ISSUE, such as police use of force, makes it difficult to find police departments willing to share their data and to cooperate in activities that help verify the accuracy and usefulness of that data. After carefully defining terms, choosing the best research method, and designing forms to capture all pertinent information, the researcher must also find cooperative research sites. The success of the earlier study (Alpert and Dunham 1997) highlighted both the difficulty and the necessity of finding cooperative agencies in order to produce meaningful research, albeit research that is limited to site-by-site findings. In this chapter we detail our contact with the various police departments we approached in connection with the various studies that led to the writing of this book. It is an account that demonstrates the many potential difficulties associated with this field, and again underscores the need for far more research into the use of force, research that would benefit from the sound conceptual framework we suggest in Chapter 8.

Miami-Dade Police Department

The Miami-Dade Police Department(MDPD) is located in Dade County, Florida. The agency is responsible for all law enforcement activities in the unincorporated areas of the county (it was formerly known as the Metro-Dade Police Department and the Dade County Sheriff's Department). In addition, MDPD also contracts with many of the municipal agencies within Dade County to perform specialized services. In 1998, the unincorporated areas of Dade County covered 1,840 square miles with a population of approximately 2,140,000. The department had 2,968 sworn officers, 935 of whom were assigned to patrol. Data on the use of force were collected from 1996 through 1998 by supervisors who interviewed officers, suspects, and

Table 2-1. *Statistics Related to the Miami-Dade Police Department*

	1996	1997	1998
Total calls received	2,015,696	1,997,957	1,932,318
Calls for service reports with numbers	552,039	520,273	502,713
Issued (by dispatch), no reports written	572,273	536,952	494,223
Reported (no police action required)	184,774	169,970	161,754
Contacts	387,499	366,982	332,469
Arrests	70,954	59,400	59,539
Use-of-force reports	362	366	358
Percentage of arrests resulting in use-of-force reports	0.08	1.8	1.3
Unauthorized/excessive force complaints	59	99	80
Sustained complaints			4
Percentage of arrests resulting in excessive-force complaint	8	17	13
Discourtesy complaints			107
Complaints sustained			8

witnesses. They also took pictures of suspects to record any visible injuries (Alpert and Smith, 1999). As Table 2-1 demonstrates, the general numerical trend for calls, written reports, and citizen contacts is downward. In the same period the number of incidents where the use of force was reported remained fairly constant and the number of complaints alleging the use of excessive force increased (with a peak in 1997, the middle year of the three). No definite conclusions can be drawn from these numbers. They are not a clear indication of an increase in the use of force, and may simply be the result of improved reporting. The table is therefore useful in providing a snapshot of MDPD during these years.

Tables 2-2 and 2-3 describe the history of complaints in MDPD during this time period. The figures show that, although relatively few complaints were upheld, the cost of settling lawsuits was prohibitive. The obvious conclusion

Table 2-2. *Lawsuits and Claims*

Lawsuits filed	2	5	2
Claims filed	14	22	7
Lawsuits closed or settled	1	11	2
Paid out ($)	0	$483,014	$13,546
Claims closed or settled	22	14	16
Paid out per claim ($)	$11,000	$56,513	$7,500

Table 2-3. *Complaints Related to Use of Force, Miami-Dade Police Department, 1998*

Description	Number of Complaints	Number Sustained
Minor force/no visible injury (mere touching)	28	2
Unauthorized force/no visible injury (during arrest)	7	0
Unauthorized force/injury (during arrest)	18	1
Shooting/contact	14	0
Shooting/noncontact	9	0
Shooting/animal	31	0
Shooting/accidental	4	2
Criminal misconduct/battery (domestic)	8	0
Death in custody	4	0
Minor force/injury	4	0
Total (all complaints)	554	34

is that a better understanding of how force is used will not only lead to better policing, but will be cost effective.

The Data Collected from MDPD

Several sets of data were collected from MDPD and activities performed by its officers. First, agency data were collected, as full and open access was provided to all departmental information. The use-of-force forms for 1996 were downloaded from the MDPD computer files, and the 1997 and 1998 forms were reviewed in the MDPD Professional Compliance Bureau by the principal investigator and other research staff. The relevant information was coded and entered into an SPSS program along with the 1996 data. This merged data set allows for a variety of analytical strategies. Second, data from suspects were collected. Unfortunately, the suspects were not the same ones who interacted with the officers and whose behavior was analyzed in the reports. In this aspect of the study, suspects who were booked into the Miami-Dade County jail and were chosen for participation in the National Institute of Justice's Arrestee Drug Abuse Monitoring (ADAM) project were interviewed (see Chapter 5 for a description of the methods and results).

Metropolitan Police Department, Washington, D.C.

The MDPD has a history of cooperating with researchers and has been collecting data on the use of force for several decades. Researchers were also interested in analyzing data from a department that did not have a history

of data collection. Because the Police Executive Research Forum (PERF) in Washington, D.C., was a partner in the research project, we looked for an agency in the same area. The first agency contacted was the Metropolitan Police Department in the District of Columbia (MPD). The MPD was selected for several reasons: its "media" reputation as an agency fraught with problems, the high number of complaints filed against its officers for excessive use of force, and its reputation as a "rough" department. Initially, the administrators were encouraging, but no commitments were made. After several months of discussions and no agreement, we looked for another department in the area.

Prince George's County Police Department

Early inquiries into conducting research at the Prince George's County (Maryland) Police Department (PGPD) received a positive response. The chief at the time was on the PERF board and had previously been with the Miami-Dade Police Department. He was familiar with the work of the principal investigator in Miami on the use of force and other police activities. Several meetings were held and it became apparent that the PGPD did not routinely collect use-of-force information, but they were willing to create a form that would allow them to participate in the research. The original plan was to review files from the last year and to collect and analyze files for the upcoming year. Unfortunately, the design could not be implemented, as these data were not available.

Prior to the initiation of this project, PGPD captured use-of-force information on a Commander's Information Report (CIR). Officers are required to submit a form to their commanding officers after any incident involving the use of force, a chemical agent, or a weapon; a significant risk of suspect injury; and/or actual suspect injury. After reviewing the CIR, commanders from the six districts send the forms to the Investigative Services Division. Personnel in this division review the information in these forms to determine whether an official inquiry into an event is necessary. The Investigative Services Division does not archive CIR forms, and typically destroys them, either after the initial review or after thirty days. Without these files, the researchers were unable to study the department's use-of-force history or trends. Attention therefore shifted to collecting new information on the use of force. The PGPD agreed to allow the research staff to review and code information from an agency form created specifically for the study and to permit interviews with a sample of officers and suspects to help determine the reliability of the information contained on the use-of-force reports completed by officers.

Community

Prince George's County, Maryland, is located in the heart of the Baltimore/ Washington, D.C., metroplex. It includes 487 square miles and in 1999 had

a population of 794,953. The population consists of approximately 56.6 percent African Americans, 38.4 percent whites, and 4.4 percent Hispanics. Some of the major employers in the region include city governments, the University of Maryland, the U.S. Census Bureau, and Andrews Air Force Base. Its proximity to Washington, D.C., has attracted federal contracts and installations to the region.

The Agency

In 1999, there were 1,264 sworn officers in the Prince George's County Police Department, who are represented by a powerful union. Eighty-six percent of the officers were male and 14 percent were female. The majority of the police force (53 percent) was white, 41 percent was African American, 3 percent was Hispanic, and 2 percent was Asian or Pacific Islander. In 1997, the total expenditure for the department was $91,935,625, and the starting salary for entry-level officers was $29,135. All incoming recruits receive community-policing training, and the department assigns 115 officers to full-time community policing positions. Recently, PGPD reported a decrease in the number of citizen complaints against the police. According to department statistics comparing complaints in 1996 to 1997, complaints of blunt force injuries decreased by 63 percent, contact shootings decreased by 56 percent, telephone complaints decreased by 16 percent, excessive force complaints decreased by 13 percent, and calls for service increased by 6 percent.

Unfortunately, comparisons for the years after 1997 were not available.

The Development of a Research Protocol

Due to the perceived sensitive nature of the topic, research staff dedicated considerable time coordinating with the department's liaison to make arrangements for the data-collection protocol. The planning stage lasted from May 1998 through December 1998. During this time, project staff negotiated and finalized a suitable data-collection protocol and developed a memorandum of understanding (MOU) between the agencies.

Initially, project staff compared the CIR form to the form used in Miami-Dade to ensure that similar data would be collected at both sites. Although the PGPD form was not as comprehensive as the Miami-Dade form, the comparable data elements permitted comparisons of officer use of force, suspect resistance, and officer demographics. The department agreed to provide officer identification numbers linking demographic information (gender, race, age, rank, and date of hire) after an assurance by PERF that information would be confidential and that data would be reported only in the aggregate.

The terms of the MOU began on January 1, 1999, and terminated on June 1, 2000. The key components included the following:

- PGPD agreed to provide personnel assistance and department records to be used in the research.
- PERF agreed to coordinate with the commander of investigative services.
- PGPD and PERF agreed that all data accrued/generated at PERF would become the property of PERF.
- PERF agreed to share authorship with PGPD on all publications and presentations derived from the research.
- PERF agreed to share data, analysis, conclusions, and recommendations with PGPD for their management purposes and general use.
- PERF agreed to maintain confidentiality on all information, data, and departmental documents.
- PERF agreed to notify the investigative services division of any requests for information, court orders, or subpoenas for project information and data.
- PERF agreed to destroy all CIR reports once data coding and entry were complete.
- PERF agreed to dedicate a secure fax line and a fax machine for the project.

Data Collection and Management

The data-collection process was initiated in January and was completed in July 1999. The general categories of information were designed to be similar to those collected from Miami-Dade and included the following:

- Suspect demographics
- Suspect behavior
- Weapons used by the suspect
- Suspect injuries and medical treatment
- Suspect resistance
- Officer demographics
- Weapons used by the officer
- Officer injuries
- Officer use of force

Although the coding scheme used in PGPD is almost identical to the scheme used in Miami-Dade, because of the differences in the report forms and the missing data of many CIR narratives, this study did not provide the depth of information collected from Miami-Dade.

Table 2-4. *Preliminary Use-of-Force Scale*

Suspect Resistance	Officer Force Level
Cooperative	Police presence only
Needed verbal direction	Verbal direction
Verbal noncompliance (psychological intimidation)	OC spray[a]
Passive resistance	Empty hand (soft/hard)
Defensive/active resistance	Intermediate weapon
Aggravated active resistance (deadly force)	Deadly force

[a] OC, Oleoresin capsicum ("pepper spray").

A preliminary use-of-force scale was created to code the data involving suspect resistance and officer use of force (Table 2-4). This basically followed the PGPD use-of-force continuum.

The Process

Upon receipt of a CIR, the Investigative Services Division removed all identifying information about the suspect. The CIRs were then faxed to a dedicated fax line at PERF for processing. Once received, each case was assigned a project number. When necessary, one of the PGPD's command staff officers was consulted for clarification and interpretation purposes. After the coding sheets were completed, the resulting data were entered into SPSS from code sheets. These data were reviewed to ensure coding accuracy and interpretation consensus. In addition, the associate also reviewed more difficult cases, which had been flagged by the assistant.

Two hundred forty-three use-of-force incidents made up the data set from Prince George's County Police Department. The data-collection stage was completed in July 1999. However, after preliminary data analysis, project staff realized that the PGPD-derived scale provided minor variance for either officer or suspect actions. To facilitate a more in-depth analysis, a new scale was developed (Table 2-5), which was similar to that used in Miami-Dade and followed the force continuum. The only major difference was the inclusion of OC spray (oleoresin capsicum, "pepper spray"), which was not available to MDPD officers. Once this recoding was complete, all data were entered into an SPSS data file and the PGPD data forms were destroyed, according to the MOU.

Critical Developments

After the data had been collected by PGPD and sent to PERF, the chief called a meeting of his command staff and the research staff. He informed

Table 2-5. *Final Use-of-Force Scale*

Suspect Resistance	Officer Force Level
Cooperative/no resistance	Police presence/verbal direction
Verbal noncompliance/passive resistance	Strong verbal order (minimal contact)
Psychological intimidation	OC spray[a]
Defensive resistance	Forcibly subdued (defensive use, open hand)
Active resistance	Forcibly subdued (offensive use, closed hand)
Aggravated active resistor I	Intermediate weapon
Aggravated active resistor II	Deadly force

[a] OC, Oleoresin capsicum ("pepper spray").

the research staff that he was removing his support from future components of the project. He would not allow the research staff to interview any officers and would not cooperate in the identification of suspects for interview. It was not clear exactly why the chief withdrew his and his agency's support, but it was stated that the county attorneys did not want researchers interviewing suspects who had been subjected to the use of force. Although active support for the project was removed, the analysis on the use-of-force forms provided by the agency was allowed to go forward. Because suspect data from PGPD would not be available, the research staff revisited the Metropolitan Police Department and discussed the possibility of conducting research with the Richmond Police Department (RPD) in Virginia.

Metropolitan Police Department, Washington, D.C.

Because of an ongoing effort to reform the MPD and recent changes in the command staff, there was a renewed interest in the use-of-force study. Numerous meetings were held with the research staff and representatives from the MPD. At first there were concerns on the part of the MPD staff, but they eventually agreed to cooperate. It was initially difficult to locate the proper forms, but the files of all the 1999 incidents that had been sent to the Force Investigation Team (FIT) were located by summer 2000. They were then coded in a similar fashion to the data from Miami-Dade and Prince George's County. There were 100 use-of-force incidents in the Washington, D.C., data set. Unfortunately, the use-of-force selection criteria for the FIT were unclear. Specifically, the 1999 FIT report indicated that incidents using firearms and other enumerated nondeadly use of force cases were investigated by FIT, but provided little clarification beyond this. Additionally, approximately 66 percent of the forms did not include the officer's

ethnicity. Because of these problems, the analysis of this data set is not presented.

The Richmond, Virginia, Police Department (RPD)

As a result of prior cooperation with members of the research team, numerous discussions were held with the chief and his command staff (during May and early June 2000). As a result, an agreement for participation and a formal MOU was negotiated. It was agreed that the RPD would cooperate with the researchers and provide their use-of-force reports for the calendar year 2000. In addition, they agreed to allow the research staff to interview a sample of arrested suspects claimed to have had force used against them. The data-collection process began smoothly, and RPD provided the use-of-force reports for the first six months of 2000 and made arrangements for prisoners to be interviewed as they were arrested and brought to the jail. This process continued unhindered for several data-collection periods. At the end of July 2000, a letter from the chief was received stating that budgetary problems prevented further participation by the agency.

The RPD's abrupt withdrawal from the study was clearly precipitated by concerns beyond the cost of the research. The costs of the study to the RPD were negligible. For example, research staff made all copies of the use-of-force reports. The RPD merely had to remove the forms from a readily accessible filing cabinet and turn them over to the research staff for copying. As for the suspect interviews, they were conducted in the police headquarters lockup facility. This facility is staffed and maintained by the Richmond Sheriff's Department, not the RPD. The Sheriff's Department was very cooperative in providing the Richmond field researcher with access to prisoners who had recently been arrested by RPD officers. Consequently, any costs associated with the interviews were borne by the Sheriff's Department and not the RPD.

The actual reasons for terminating RPD's involvement in the project are not known. Immediately prior to its participation in the use-of-force study, the RPD had commissioned a study on racial profiling from one of the investigators connected with this project (Smith and Petrocelli, 2001). The results were given to the RPD while data collection on the use-of-force project was ongoing. The RPD was critical of the results of the racial profiling study. Despite the existence of a contractual agreement to the contrary, the department suggested to the researcher that he should not publish or otherwise release his findings. In light of this development, it seems all too possible that the RPD was concerned about its ability to control the outcome of the use-of-force project and its dissemination to audiences outside the Richmond Police Department.

The experiences with the PGPD and the RPD underscore the difficulty of obtaining the cooperation of law enforcement agencies to scrutinize sensitive matters such as the use of force. Public law enforcement agencies are accountable to the political leadership of their communities, but they are also accountable to the general public. In a democracy, the activities of the police, and especially those involving the search and seizure of citizens, should be fully open to examination for legitimate research purposes. Moreover, the objectivity of such research inquiries should not be compromised by the efforts of the police to control or influence research outcomes or the dissemination of research findings. This raises the question, did the RPD and PGPD place political expediency above their professional and ethical obligations?

The problems experienced with the MPD, PGPD, and RPD are a microcosm of problems in police research, especially research on high-risk, high-profile, and high-liability activities. Many agencies choose not to cooperate with researchers for at least two reasons. First, agencies may not collect the necessary data. While this is discouraging, there is a trend for agencies to increase their data-collection efforts. One of the benefits of accreditation is the requirement to collect information on selected types of activities. Second, even if agencies collect the necessary data, they may not want outsiders to have access to the information. We would hope that as more and more information is collected, more agencies will come to realize just how beneficial such data collection and research can be and will therefore commit to providing unfettered access to researchers in this important field of study.

Unless and until police departments decide to cooperate fully with outside research efforts, the state of knowledge about these activities will remain subject to media speculation and sensationalism. Real and potential shortcomings within departments will go unexamined and anecdotal lore will prevail over scientific scrutiny of activities. Until we reach the point where managers learn to trust and not fear outside evaluation of the actions of officers under their command, our knowledge will be based largely on data from agencies with progressive commanders and managers, such as those at MDPD.

As documented in this chapter, the efforts to secure data from agencies resulted in unlimited access to a wealth of information from MDPD and some data from PGPD. However, it also left us with unusable data from MPD and no data from RPD. The findings in this book are therefore limited to the use-of-force and suspect resistance information collected from MDPD (Chapters 3–5) and PGPD (Chapter 6). Chapter 3 also incorporates an extensive discussion of the Force Factor, a bivariate and multivariate analysis tool that incorporates a practical definition of the use of force and suspect

resistance to arrive at a relatively accurate measure of when force is used, and to what degree, in police–citizen encounters.

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Findings from Miami-Dade Police Department Study

THIS AND THE FOLLOWING TWO CHAPTERS include descriptions and analyses of information provided by the Miami-Dade Police Department (MDPD). This chapter reports the general findings from the MDPD control-of-persons reports, and should be read in conjunction with Chapter 4, which includes an analysis of the sequential actions of officers and suspects during encounters, and Chapter 5, which reviews the inconsistencies in reports from officers and suspects. The Miami-Dade Police Department provided complete access to their use-of-force and officer personnel files. Their cooperation allowed for a comprehensive review and analysis of all the use-of-force and personnel data and was instrumental in allowing the formulation of the framework given in Chapter 8, a framework that underpins this book.[1]

The data set from MDPD includes information from 1,038 official Miami-Dade Police Department control-of-persons reports from the years 1996, 1997, and 1998 (Table 3-1).[2] These data are reported by the officer's supervisor after talking to the officer, suspect, and available witnesses. The department's computerized information and an analysis of the written reports were used to create the data set. Although differences existed between officer and suspect versions in 12 percent of the cases (Chapter 7), the analyses of computerized forms and the Force Factor calculations relied on the "official" version as reported by the supervisor.

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[1] The one requirement from the agency was that any and all results had to be presented to the department's director before being released to the media or public.

[2] Forty-two of the cases were omitted from our analysis because they involved cases with only an injury to the officer, but there were no suspects and no force was used. Another 33 cases were omitted because they involved dog shootings and had no (human) suspects. Finally, 6 cases were omitted because they reported accidental firing of weapons and involved no suspects. The remaining cases to be included in our analysis numbered 1,038 (see Table 3-1).

Table 3-1. *Number of Usable
Incidents Involving Force, 1996–1998*

Year	Frequency	Percentage
1996	362	34.9
1997	348	33.5
1998	328	31.6
Total	1038	100

We begin our analysis of the Miami-Dade Police Department Control of Persons Reports with information on suspect characteristics and actions, then discuss arresting officer characteristics and actions, and analyses of the interaction patterns between officer and suspect. We also present analyses on the role of officer and suspect ethnicity. A final section discusses the Force Factor data and analysis.

Suspect Characteristics and Actions

Suspects ranged from 12 to 85 years of age, with a mean of 29.6 years. Forty-four percent of the suspects were African American, 32 percent were Hispanic, and 24 percent were Anglo. Ninety percent of the suspects were male and 10 percent were female. Thirty percent of the suspects were impaired by alcohol or drugs at the time of the incident (22 percent were impaired by alcohol alone and the remainder by a variety of illegal drugs). Officers reported that sober suspects were "highly agitated" 28 percent of the time. Twenty-eight percent were visibly upset and 16 percent displayed erratic behavior. However, 28 percent of the time, suspects remained calm when interacting with the officers.

Since most of these cases involved some degree of force used by the officer, it is not surprising that almost all cases involved some degree of resistance by the suspect (97 percent). The category of resistance reported most often was actively resisting arrest (39 percent), followed by attempting to escape or fleeing the scene (26 percent). In 21 percent of the cases, the suspect assaulted the officer. The most common type of force used by the suspect was to strike or hit an officer (36 percent). In 34 percent of the incidents, the suspect pushed or pulled the officer, and another 12 percent of suspects grabbed or held the officer. Seven percent of the incidents involved only threatening behavior.

Most resistance involved hands and arms only (70 percent). Twelve percent of the incidents involved fists, 7 percent involved feet or legs, and less than 3 percent involved a firearm (handgun, rifle, or shotgun). Three

percent of the suspects used a vehicle to assault an officer. Nearly 1 percent used a cutting instrument, such as a knife.

Eighty-five percent of the suspects received some type of injury. The most common type of suspect injury was a bruise or an abrasion (53 percent), followed by lacerations (22 percent). Seven percent of the suspects had injuries unrelated to the direct action of the police, another 4 percent had dog-bite injuries, and 2 percent had injuries from gunshots.

The Effect of Alcohol and/or Drug Impairment on Suspect Behavior

We examined whether the initial behavior of an impaired suspect differs from that of a suspect who is sober, and whether a suspect's intoxication affects his or her level of resistance or an officer's level of force. Further, we investigated the possible relation between suspect intoxication and the chances of injury to the suspect or the officer. We found that suspects who were under the influence of alcohol or drugs were far less likely to be calm (10 percent vs. 28 percent) and less likely to be visibly upset (23 percent vs. 28 percent); however, impaired suspects were more than twice as likely to be erratic in their behavior as sober suspects (33 percent vs. 16 percent) and were somewhat more likely to be highly agitated (33 percent vs. 28 percent).

Suspects who were intoxicated were only slightly more likely to resist the officer than sober suspects, although they resisted in different ways. They were less likely to attempt to flee the officer (17 percent vs. 29 percent); however, they were slightly more likely to resist actively or to directly assault the officer. Even though the overall significance of the relationship between impairment and type of resistance by the suspect was not strong, there was a fairly large difference regarding the use of a gun. Impaired suspects were less likely than sober suspects to use a gun to resist the police (1 percent vs. 3 percent).

In spite of being slightly more likely to directly assault the officer than were sober suspects, impaired suspects were no more likely to be injured during the arrest. Further, officers were no more likely to be injured in incidents involving impaired suspects than in incidents with sober suspects. However, while force was no more likely to be used against impaired suspects than against sober ones, the type of force differed. Impaired suspects were much more likely to receive minimal force (31 percent vs. 19 percent).

Officer Characteristics and Actions

The officers ranged from 20 to 60 years old, with a mean age of 33.1 years. Most officers were Anglo (60 percent), 26 percent were Hispanic, and 14 percent were African American. Ninety-two percent of the officers were

male. Most of the officers were patrol officers (92 percent), and 5 percent were sergeants. The majority of the officers were assigned to patrol (85 percent), 4 percent were assigned to general investigation, and 4 percent were assigned to the K9 unit (the remaining 7 percent were from a number of other units).

The most common level of force used by officers to forcibly subdue suspects was use of hands and fists (55 percent). Officers used dogs, batons, other intermediate weapons, and firearms in another 23 percent of the cases to control suspects. They hit or struck suspects in 11 percent of the cases and pushed or pulled suspects in 6 percent of the incidents. Officers used some type of restraint in 6 percent of the incidents and discharged their weapon in 5 percent. Police dogs bit the suspect in 4 percent of the cases. Twenty percent of the incidents involved minimal force, and 3 percent required either minimal contact with the suspect or no force.

The most common injury to officers was bruises or abrasions (60 percent), followed by sprains or strains (15 percent) and lacerations (14 percent). Three percent of the injuries involved officers being bitten by the suspect, and another 1 percent suffered broken or fractured bones. Only 0.05 percent of the officers were injured by gunshots. The vast majority of officers received no treatment for their injuries (74 percent). Thirteen percent were given first aid by fellow officers, and 7 percent were treated by fire and rescue at the scene. Five percent were treated at a hospital, and less than 1 percent were seen by their personal physician.

Patterns of Interaction between Officers and Suspects

In our examination of the interaction patterns between the officer and suspect we were interested in whether the initial behavior a suspect displayed determined the level of resistance the suspect eventually offered. The results demonstrate that there is a relationship between these two variables. We observed that initially calm suspects were the least likely to actively resist the officer (23 percent) and less likely than most to assault the officer (18 percent), but they were the *most* likely to attempt to flee (39 percent). Additionally, those suspects who initially acted in a calm manner were the most likely to resist the officer with a gun or use a vehicle to assault the officer. However, the vast majority of suspects who resisted did so with their body (91 percent) rather than using any type of weapon.

The initial behavior of the suspect influenced whether the suspect was injured during the arrest. Suspects who were initially calm were slightly more likely to be injured than other suspects (except for Baker Act [mentally challenged] suspects, who were all injured) and the least likely to have force used against them. Nonetheless, 95 percent of these suspects had force used on them to apprehend them. Initially calm suspects were no more likely to

have minimal force used, and were less likely than other suspects to be forcibly subdued by the officer's hands. Conversely, initially calm suspects were the most likely to be forcibly subdued by the officer using some method other than hands.

An analysis of the initial behavior of the suspect and officer injury provided three particularly interesting results: (1) suspects described as visibly upset or highly agitated inflicted more injuries to officers than other suspects (42 percent and 48 percent, respectively), (2) Baker Act suspects inflicted the fewest injuries; and (3) initially calm suspects inflicted officer injury 30 percent of the time.

Another interesting question was how suspect resistance affected the level of force the officer used and whether officers chose an inappropriate level of force for the situation. The data demonstrate that the level of subject resistance is highly related to the level of force used by the officer. Furthermore, it appears that there are few obvious mismatches between the two. For example, all except two suspects who assaulted an officer had force used against them, and the force usually was stronger than minimal. Similarly, suspects who gave no resistance were very unlikely to have much force used against them. Eighty-four percent had either no force or minimal force used against them.

There was a relatively strong relationship between the level of force used by an officer and chances of officer injury. Increasing levels of force applied by an officer corresponded to higher probabilities of the officer getting hurt. When no force was used, only 4 percent of officers were injured. However, minimal-force situations resulted in 29 percent of the officers being injured, and situations involving officers forcibly subduing suspects with their hands resulted in 50 percent of officers being injured. It is interesting that when officers used a method of force other than their hands, injuries decreased to 34 percent.

It is clear that with increasing levels of suspect resistance, the chance of an injury to the attending officer also increased. No resistance or passive resistance resulted in officer injury. However, when the suspect attempted to flee, the chance of an officer injury increased about five times. The chance of officer injury increased even further when the suspect actively resisted the arrest or incited others. The chance of an officer injury increased more than seven times when comparing none (8 percent) or passive resistance (6 percent) to cases when suspects directly assaulted the officer (51 percent).

Linking Officer Characteristics and Behavior

In a perfect police department, with perfect officers and perfect training, officer characteristics would not be related to behavior. All officers would

respond to the same situations in the same way and according to the rules, regulations, and policies of the department. In the real world, however, individual characteristics often do influence responses. In the research carried out at MDPD, officer characteristics had little effect on whether force was used or the level of force used. There were no statistically significant differences in the level of force used by male and female officers. Further, the ethnicity of officers did not affect whether force was used. Officer age differences were statistically significant, but the differences were minimal and could have reflected the differences in assignments of younger versus older officers. As the level of force increased, the average age of the officer involved also increased. The average age of the officer for the highest level of force (subduing the suspect with force other than one's hands) was almost thirty-four years.

Officer and Suspect Ethnicity

The data presented in Table 3-2 show the relationship between the ethnicity of the officer and that of the suspect in use-of-force situations. Officers were most likely to use force against suspects with the same ethnic background. For example, Anglo officers used force against Anglo suspects (26 percent) more frequently than did African-American (16 percent) or Hispanic (24 percent) officers. Black officers used force against black suspects (67 percent) more frequently than did Anglo (40 percent) or Hispanic (41 percent) officers. Hispanic officers used force against Hispanic suspects (35 percent) more frequently than did Anglo (33 percent) or black officers (17 percent). The differences were the least pronounced for Anglo officers and the most pronounced for African-American officers. This could be a result of the deployment of officers to areas with a preponderance of citizens of their own ethnicity. However, with the greater diversity of neighborhood ethnicity in recent years, this finding may reflect a proclivity on the part of officers to respond differently to various ethnic groups. If this is true, then a possible conclusion is that ethnic groups feel more comfortable using force on suspects from their own group.

When we compare officer/suspect ethnic matches with the degree of resistance of the offender, as presented in Table 3-3, we see that black officers arresting either Anglo or Hispanic suspects are the most likely to meet with resistance (100 percent). Similarly, Hispanic officers arresting black or Hispanic suspects met resistance 99 percent of the time. There are also differences in the frequency and level of resistance in relation to the ethnic match. For example, the ethnic match resulting in the greatest likelihood of the offender assaulting the officer is when a black officer is arresting an Anglo suspect (36 percent). Contrast this to the likelihood of an assault when a Hispanic officer is arresting a Hispanic suspect (15 percent), or when a black officer is arresting a Hispanic suspect (17 percent).

Table 3-2. *The Ethnicity of Officers and Suspects in Force Situations*[a]

Officer's Ethnicity	Suspect's Ethnicity			
	Anglo	Black	Hispanic	Total
Anglo	158 (26%)	242 (40%)	200 (33%)	600 (61%)
Black	22 (16%)	90 (67%)	23 (17%)	135 (14%)
Hispanic	61 (24%)	104 (41%)	89 (35%)	254 (25%)
Total	241 (24%)	436 (44%)	312 (32%)	989 (100%)

[a] Significance = .000.

Table 3-4 matches officer ethnicity with the level of force used on sus-pects of various ethnicities. Force was used most often when the officer was Hispanic and the suspect was Hispanic (100 percent) and when the officer was Hispanic and the suspect was Anglo (98 percent). Force was used least

Table 3-3. *Officer/Suspect Ethnic Matches and Resistance by Suspect*[a]

Officer/ Suspect	No Resistance	Passive Resistance	Attempted to Flee	Actively Resisted	Resisted Arrest/Incite	Assaulted Officer
Anglo/ Anglo	7 (4%)	16 (10%)	27 (17%)	73 (46%)	4 (3%)	31 (20%)
Anglo/ black	4 (2%)	17 (7%)	68 (28%)	97 (40%)	13 (5%)	43 (18%)
Anglo/ Hispanic	9 (5%)	12 (6%)	53 (27%)	73 (37%)	3 (2%)	50 (25%)
Black/ Anglo	—	1 (5%)	5 (23%)	6 (27%)	2 (9%)	8 (36%)
Black/ black	3 (3%)	3 (3%)	30 (33%)	35 (39%)	2 (2%)	17 (19%)
Black/ Hispanic	—	3 (13%)	6 (26%)	8 (35%)	2 (3%)	4 (17%)
Hispanic/ Anglo	1 (2%)	8 (14%)	18 (31%)	19 (32%)	2 (3%)	11 (19%)
Hispanic/ black	1 (1%)	6 (6%)	31 (30%)	36 (35%)	6 (6%)	24 (23%)
Hispanic/ Hispanic	1 (1%)	10 (11%)	24 (27%)	36 (40%)	5 (6%)	13 (15%)
Total	26 (3%)	76 (8%)	262 (27%)	383 (39%)	39 (4%)	201 (20%)

[a] Significance = .044.

Table 3-4. *Officer/Suspect Ethnic Matches and Level of Force Used by the Officer[a]*

Officer/Suspect	No Force	Minimal Force	Force w/Hands	Force Other
Anglo/Anglo	4 (3%)	43 (27%)	81 (51%)	30 (19%)
Anglo/black	6 (3%)	38 (16%)	135 (56%)	61 (25%)
Anglo/Hispanic	6 (3%)	57 (29%)	95 (48%)	42 (21%)
Black/Anglo	1 (5%)	3 (14%)	14 (64%)	4 (18%)
Black/black	5 (6%)	12 (14%)	47 (53%)	25 (28%)
Black/Hispanic	1 (5%)	4 (18%)	16 (73%)	1 (5%)
Hispanic/Anglo	1 (2%)	16 (27%)	30 (50%)	13 (22%)
Hispanic/black	4 (4%)	18 (17%)	55 (53%)	27 (26%)
Hispanic/Hispanic	—	31 (35%)	40 (46%)	17 (19%)
Total	28 (3%)	222 (23%)	513 (52%)	220 (22%)

[a] Significance = .021.

when the officer was black and the suspect was black (94 percent). Force with hands was used most often when the officer was black and the suspect was either Hispanic (73 percent) or Anglo (64 percent). Force, other than hands, was used most often when the suspect was black regardless of the ethnicity of the officer. The greatest within-column difference is in the Assaulted Officer category. The highest ethnic match is for black officers and Anglo suspects and the lowest is Hispanic officers and Hispanic suspects. Although the numbers are small, these differences are important to note.

In sum, officers use comparable levels of force regardless of their ethnicity. However, it is interesting to note that most of the small amount of variation in the relative use of force occurs among minority officers. All the deviations from the overall mean occur among incidents with black or Hispanic officers. Black officers tend to treat Anglo suspects with less force than the overall average level of force, and use more relative force against Hispanic suspects. Hispanic officers use significantly less force for a given level of resistance when arresting Anglo suspects but more force when arresting black and Hispanic suspects. Anglo officers tend to use the same amount of force regardless of the suspects' ethnicity.

Type of Call for Service and Officer/Suspect Interactions

Another important factor in understanding officer/suspect interactions is the type of call for service that initiated the contact. There are forty different types of calls for service coded in the MDPD files. When received by an officer, each type of call can elicit a different picture in the officer's mind and can create different expectations of a given situation. We grouped the

calls into seven categories to examine the actual differences in the situations resulting from each category of call. The seven types of calls are as follows:

1. Administrative (18 percent): Special information, conduct investigation, meet an officer, clearance check, complete check, to radio shop
2. Traffic calls (11 percent): Driving under the influence (DUI), traffic accident, traffic stop, lost or stolen tag
3. Property offense calls (16 percent): Stolen vehicle, burglary alarm, burglary, larceny vandalism, fraud
4. Violent-crime calls (33 percent): Robbery, shooting, homicide, assault, sex offense, abduction
5. Domestic disturbance calls (13 percent): Domestic disturbance
6. Drug/alcohol offense calls (5 percent): Intoxicated person, narcotics investigation, operation clean sweep, drug related
7. Other (4 percent): Suspicious vehicle, suspicious person, prisoner, subject wanted, sick or injured person, Baker Act suspect, attempted suicide, fire

Officers were most likely to encounter calm suspects on property crime (34 percent) and drug/alcohol calls (31 percent). They were least likely to find calm suspects on domestic disturbance calls (7 percent). In fact, the most highly agitated suspects were from domestic disturbance calls (40 percent) and the "other" category (43 percent). Contrary to expectations, domestic disturbance calls, not drug- or alcohol-related calls, have the highest percentage of suspects that are impaired (48 percent). The next highest percentage of impaired suspects comes from traffic offenses (38 percent) due to the fact that traffic stops are often instigated for DUI offenses. The suspects least likely to be impaired come from property offense calls (12 percent) and violent-crime calls (28 percent).

Domestic disturbance calls, along with violent-crime calls, have been singled out by police administrators and researchers as the calls most likely to result in officer injuries. Although one might expect a higher level of force to be used during these types of calls, we found the opposite to be true: "Police calls for service that include stolen vehicles, burglaries, larcenies, vandalism, and fraud (property offenses) resulted in officers using significantly higher levels of force (relative to suspect resistance) compared to domestic disturbance calls" (MacDonald et al., 2003:125–6). One explanation for this is the training police departments are now given in relation to domestic calls. The consequence is that officers may be better trained and prepared to handle domestic violence calls, and also more likely to arrive at the scene with a significant show of force with multiple units, allowing them to control the situation with less actual force relative to resistance. In the other, "less dangerous" calls, officers may be more likely to be caught off guard when they are confronted with significant resistance, and, as a

result, respond with higher levels of force. If this is true, it would indicate that when officers are sensitized to danger and better trained and prepared for the situations they encounter, they use less relative force to control the situation.

Administrative, traffic, and property offense calls for service have suspects who are twice as likely to offer no resistance (4 percent) as calls for violent crime or domestic disturbance (2 percent). All suspects from drug- or alcohol-related calls offered some resistance, but they were the least likely to actively resist the officer (15 percent) and less likely than most to assault the officer (29 percent). Most impaired suspects were involved in trying to escape (45 percent). The suspects most likely to assault the officer were those in the "other" category (30 percent) and those from domestic disturbance calls (62 percent).

In the majority of encounters (91 percent), suspects used their body to resist the officer. It is of interest, however, to assess which types of call result in the use of weapons. Administrative calls have very low probability of firearms or vehicles being used as weapons (>1 percent), but a slightly higher-than-average likelihood that a blunt weapon or cutting instrument will be used. Calls to traffic incidents have the lowest use of blunt or cutting instruments (1 percent), but an average use of guns and vehicles. Property offense calls had no use of guns, but the highest use of vehicles as weapons (7 percent), more than double the average for other types of calls. Violent-crime calls had twice the average use of guns (4 percent) and a higher-than-average use of vehicles as weapons (4 percent). Domestic disturbance calls had a higher-than-average use of blunt or cutting instruments (3 percent) and a lower-than-average use of guns and vehicles. Drug- or alcohol-related calls had a higher-than-average use of blunt and cutting instruments (3 percent), but no gun use, and only average vehicle use. Calls in the "other" category had the highest risk of suspects using guns to resist (8 percent).

Officers used force most often on domestic disturbance calls (99 percent) and least often on drug- or alcohol-related calls (94 percent). Domestic disturbance calls also resulted in the most situations requiring the suspect to be forcibly subdued with hands (65 percent). However, using force other than hands was most likely on property offense calls (33 percent). Compare this with only 11 percent of domestic disturbance calls requiring the use of force other than hands.

Generally, for both suspects and officers there was no statistically significant relationship between the type of call and the injury received. However, certain types of call do appear to deviate from this norm. Drug- or alcohol-related calls resulted in a higher-than-average percentage of injury for suspects (86 percent), and for officers, traffic calls (46 percent) and "other" calls (50 percent) led to a higher-than-average injury rate.

The Force Factor

As discussed in Chapter 1, prior research on the use of force by the police has focused on whether force was used or the highest level of force reached in an encounter. A problem with using these measures is that they do not account for the level of resistance by the suspect. Obviously, a measurement of force that does not take into account the level of resistance is quite limited. Alpert and Dunham (1997) devised a measurement scheme, entitled the Force Factor, which combines the level of suspect resistance with the level of force an officer applies. The Force Factor is used in this analysis to focus on the level of force used by the police *relative* to the level of resistance offered by the suspect.

To calculate the Force Factor, one must measure both the level of resistance displayed by the suspect and the level of force used by the officer, and then scale them relative to each other. The levels should correspond to the force continuum adopted and taught by the agency. Even though the Force Factor is a relative measure of force, in situations where the level of force used by the police is greater than the level of resistance (giving a positive value of the Force Factor), there is no implication that this level of force was excessive or improper. For example, an officer may justifiably use more force than a suspect to gain control of a situation. Similarly, it is possible that a suspect's resistance may exceed the level of force used by the officer (giving a negative value of the Force Factor). A Force Factor representing such a disparity does not necessarily mean that the officer's level of force was either too weak or improper. For example, a lesser use of force by the police could represent an incident in which a suspect shoots an officer who is unable to respond. Similarly, a negative value could represent a suspect who attacked an officer but who was controlled with a minimum use of force. Patently, the Force Factor that reflects the greatest difference in the use of force is the most interesting one in analysis and review, although neither positive nor negative numbers can, of themselves, equate to a proper or improper use of force.

The original Force Factor was developed in cooperation with the police department in Eugene and Springfield, Oregon, as well as the Miami-Dade Police Department (Alpert and Dunham, 1997). Although it was similar to the version used in Miami-Dade, the Oregon data had fewer categories of police use of force (no force, slight force, forcibly subdued with hands, and forcibly subdued suspects using methods other than hands) and corresponding suspect resistance (no resistance, slight resistance, moderate or high resistance, and violent or explosive resistance). The Force Factor was calculated using the same methods as those in Miami-Dade, by subtracting the level of resistance from the level of police force to arrive at the equation Force − Resistance = Force Factor. Comparisons with Miami-Dade are as
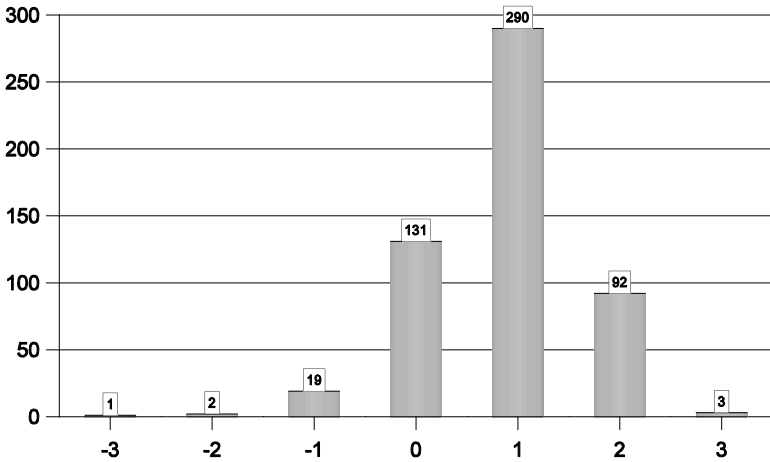
Figure 3-1. The Oregon Force Factor.

compelling as they are problematic, given that the two data sets represent different selections of incidents, and also that the Oregon data set has broader categories. Additionally, it should be noted that Eugene and Springfield train their officers to use slightly more force than they encounter. Although there may be concerns about interpreting the intervals between the levels of force, it seems that the Force Factor accurately reflects the differences in policies and force continua between Oregon and Miami-Dade. Therefore, the Force Factor can be a useful and practical measure for the use of officer force and suspect resistance. The Force Factor for the Oregon data are presented in Figure 3-1.

Force Factor from Miami-Dade Police Department

From this data set, we computed three Force Factor graphs. First, we calculated the Force Factor for our 1993 to 1995 data; second, we calculated the 1996 to 1998 Force Factor using the same codes as the previous years; finally, we used the 1996 to 1998 data, which included more levels of force and resistance, to create the Force Factor for MDPD.

The first Force Factors included the level of citizen resistance from the control-of-persons reports, which were divided into four ordinal categories: (1) no resistance, (2) passive resistance, (3) active resistance, and (4) assaulted officer. No resistance indicates that the suspect was cooperative and followed all of the officer's verbal instructions. Passive resistance includes evading the police or hiding. Active resistance involves impeding the officer's movement, being aggressive, fleeing the scene, or physically resisting the officer's orders. Assaulting an officer incorporates actions that are
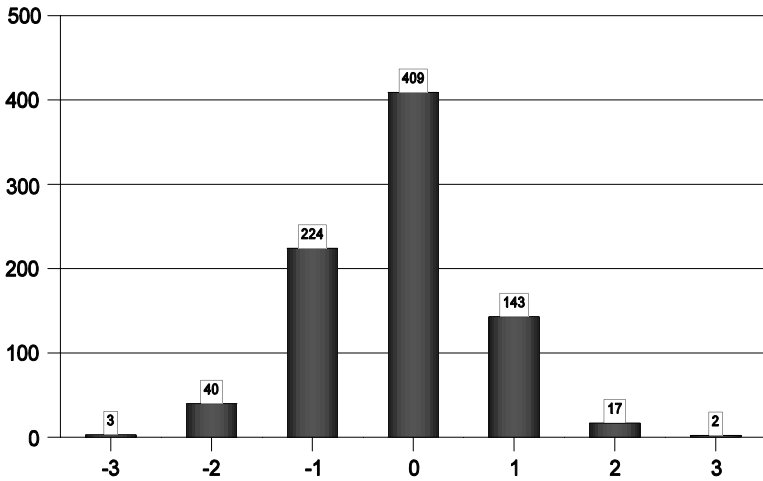
Figure 3-2. Miami-Dade Force Factor, 1993–1995.

intended to cause injury. The corresponding categories for levels of police use of force are (1) no force, (2) minimal force, (3) forcibly subdued suspect with hands, and (4) forcibly subdued suspect using methods other than hands. No force indicates the suspect complied with verbal directions. Minimal force means the officer had to use strong directive language and/or minimal physical force (including come-along holds) to encourage the suspect to cooperate and follow directions. Incidents where officers used their hands to control a suspect, including fighting and wrestling with a suspect, were included in the third category. The types of force in the last category include use of pepper spray, use of a PR-24 baton, or use of a firearm.

To calculate the MDPD Force Factor, we subtracted the level of resistance (1–4) from the level of police force (1–4). The range of the Force Factor is from -3 to $+3$. A 0 is interpreted as commensurate force for the level of resistance. For example, no resistance and no force would be $1 - 1 = 0$; passive resistance and minimal police force would be $2 - 2 = 0$. If the level of force is higher than the level of resistance, then the Force Factor is positive, with one point for each level of incongruence to a maximum of 3. If the level of force is lower than the level of resistance, then the Force Factor is negative, with one point for each level of incongruence, to a maximum of -3. The distribution of scores on the Force Factor for the 1993 to 1995 Miami-Dade data is close to a normal curve, but slightly skewed to the negative side, indicating the use of less force relative to resistance (see Figure 3-2).

For comparison purposes, Figure 3-3 displays the Force Factor distribution for MDPD data collected in 1996 to 1998. It is interesting to note the stable distribution of the Force Factor over a period of nearly six years.
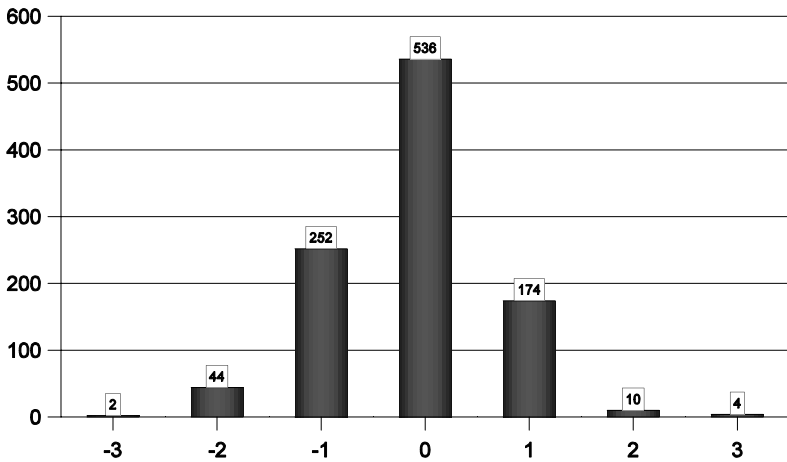
Figure 3-3. Miami-Dade Force Factor, 1996–1998.

The percentage of cases falling along the distribution from 1993 to 1995 is nearly identical to the distribution found in 1996 to 1998. The only slight change is the shift of the 1996 to 1998 cases toward the zero point, which represents slightly more force being used, but also more balance between the level of suspect resistance and officer force. There is a slight decrease in the Force Factor mean for the 1996 to 1998 period from the 1993 to 1995 time frame (see Table 3-5).

A More Detailed Force Factor

The data collected from 1996 to 1998 included two different gauges of the levels of use of force by an officer and of suspect resistance. The first is the code the supervisor was forced to use. That is, the control-of-persons form was limited to four selections from which the supervisor had to select. Additionally, the supervisor was limited in the selections for the level of suspect resistance (i.e., passive resistance, active resistance or fleeing officer,

Table 3-5. *A Comparison of Force Factor Distributions and Means for 1993–1995 and 1996–1998*

	−3	−2	−1	0	1	2	3	Mean
1993–1995	3	40	224	409	143	17	2	
	(0.4%)	(5%)	(27%)	(49%)	(17%)	(2%)	(0.2%)	−0.16
1996–1998	2	44	252	536	174	10	4	
	(0.2%)	(4%)	(25%)	(52%)	(17%)	(1%)	(0.4%)	−0.14

Table 3-6. *Categories of Suspect Resistance and Officer Use of Force*

Suspect Resistance	Officer Force
1. Cooperative/no resistance	1. Police presence/verbal direction
2. Verbal noncompliance/passive resistance/psychological intimidation	2. Strong verbal order (minimal contact)
3. Defensive resistance/attempted to flee	3. Forcibly subdued, hands or feet (defensive use, open hand)
4. Active resistance	4. Forcibly subdued, hands or feet (offensive use)
5. Aggravated active resistance (used weapon, nondeadly)	5. Forcibly subdued, intermediate weapon
6. Active resistance (with a deadly weapon)	6. Deadly force

assaulted the officer). The second measurement of the level of force and resistance was obtained from the narrative written by the supervisor, giving the specific details of the encounter as gathered from the relevant officers, suspects, and witnesses. Trained researchers extracted the levels of suspect resistance and force used by the officer from the narrative. This record was designed to be more detailed than the previous delineations of the Force Factor, now entertaining six categories of force instead of four. The new categories were also designed to be behaviorally anchored. That is, to refer to specific behaviors rather than general categories of behaviors (i.e. strong verbal order with minimum contact rather than minimum force). This new measurement of the levels of force has greater reliability and accuracy because its referents are more concrete and so more easily determined. The new categories used to measure suspect resistance and use of force by an officer are listed in Table 3-6.[3]

This application of the Force Factor ranges from −5 to 5, and its statistical distribution is very similar to that of the original Force Factor, which uses the more general categories of suspect resistance and officer use of force. This distribution is illustrated in Figure 3-4. The distribution is slightly skewed to the minus side and again corresponds more or less to a normal curve. The Force Factor can be used on data from different groups of officers or types of calls or assignments. Although we have presented only the overall agency

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[3] A graduate student was trained and collected approximately 80 percent of the data. When questions arose concerning the category of force or resistance, the form was checked by the Principal Investigator, who determined the appropriate levels. This occurred nineteen times. The Principal Investigator collected the remaining 20 percent of the data and checked a 5 percent sample of the work performed by the graduate student. There were no differences between the two readers.
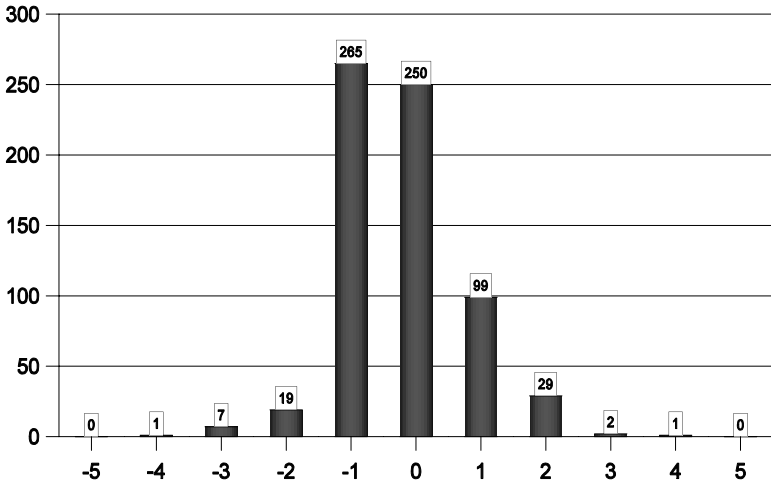
Figure 3-4. Detailed Miami-Dade Force Factor, 1996–1998.

scores, those for different shifts, districts, units, or assignments would be instructive in answering specific questions or training concerns.

There are a number of variables measured in our study that are significantly related to the Force Factor. The bivariate relationships of these variables with the Force Factor will be discussed independently, followed by a multivariate analysis of these variables, used to assess their relative influence on the Force Factor.

The Force Factor and Suspect Characteristics

There are four suspect characteristics that are significantly related to the Force Factor: gender, the suspect's initial behavior, whether the suspect was impaired by alcohol or drugs, and the level of the suspect's resistance to the officer. The suspect's age and ethnicity are not related to the Force Factor scores.

Female suspects receive less force relative to the level of resistance than male suspects, probably because female suspects are generally perceived as less of a threat than males.

When the suspect is initially calm, the force used by the officer is equal to the level of resistance (i.e., no force). However, as the behavior of the suspect increases in energy, the gap between the officer's use of force and the suspect's level of resistance widens. In all cases, with the exception of Baker Act suspects, as a suspect's resistance increases in energy, the amount of officer force in relation to the suspect's resistance decreases (although the officer's actual force often increases).

Table 3-7. *Force Factor Means and Standard Deviations*
(SDs) for Ethnic Matches between Officer and Suspect[a]

Officer/Suspect	Mean	SD	Cases
Anglo/Anglo	−0.26	0.91	113
Anglo/black	−0.23	1.03	166
Anglo/Hispanic	−0.29	0.87	109
Black/Anglo	−0.64	0.67	11
Black/black	−0.28	0.96	65
Black/Hispanic	−0.15	0.69	13
Hispanic/Anglo	−0.38	0.89	34
Hispanic/black	−0.15	0.90	74
Hispanic/Hispanic	−0.04	1.16	56
Group totals	−0.24	0.96	641

[a] Significance = .598.

The relationship between the Force Factor and the suspect being under the influence of alcohol or drugs during the encounter with the police is statistically significant. Impaired suspects have less force used on them relative to their level of resistance than suspects who are not impaired.

The Force Factor and Officer Characteristics

There are three officer characteristics that are significantly associated with the Force Factor scores: gender, age, and the date the officer was hired by the department. Female officers used significantly less force for a given level of resistance than male officers. With regard to an officer's age, the youngest officers (in their twenties) used less force in relation to the level of the suspect's resistance, and officers in their forties used more force. As with the age of an officer, the date of hire is significantly associated with the Force Factor. The longer the officer was been on the force, the greater the level of force he or she used for a given level of resistance, with the exception of the officers on the force for six to ten years. These officers had the lowest level of force for a given level of resistance (−0.50).

The Force Factor and Ethnic Matches between Officers and Suspects

While the overall relationship between ethnic matches between officers and suspects is not statistically significant, there are some differences in mean scores that are large enough to merit comment (see Table 3-7). Black and Anglo officers arresting Anglo suspects employ lower levels of force in relation

to the level of resistance than other ethnic matches, and black officers use lower levels of force against Anglo suspects than do Hispanic officers. The highest level of officer use of force in relation to suspect resistance occurs when Hispanic officers arrest Hispanic suspects (-0.04). The other ethnic matches using the higher level of force in relation to the level of resistance are black officers arresting Hispanic suspects and Hispanic officers arresting black suspects, although these also remain negative.

The Force Factor and Injuries to Officers and Suspects

Another important issue is the level of danger to the officer and suspect when different ratios of force to resistance are used. For incidents in which the officer is injured, less force is used relative to the level of resistance. In other words, officer injury is more likely to occur when less force is used relative to suspect resistance. It is therefore possible that an officer's lack of commensurate force may contribute to an increased rate of officer injury.

Incidents involving suspect injury involve more force relative to the level of resistance than incidents in which the suspect was not injured. In other words, as force increased relative to resistance, so did suspect injury. It would seem that officers are in a trade-off situation: Using more force in relation to the level of resistance decreases the chances of officer injury, but conversely, it increases the chances of injury to suspects.

Multivariate Analysis

An analysis of a hierarchical ordinary least square (OLS) regression analysis allows us to assess the relative influence of variables on the Force Factor. We categorize these variables into two groups: criteria that are legitimate to use in deciding the level of force to control a suspect and criteria that are illegitimate for this purpose. For example, it is appropriate to use the level of resistance as a gauge in deciding the appropriate level of force to use in apprehending a suspect, but it would not be appropriate to use the suspect's ethnicity to make such decisions. The data are presented in Table 3-8.

Table 3-8 summarizes the results for the multivariate analysis of all variables that are significantly related to the Force Factor, to examine the *relative* importance of each variable. In some cases, these variables might be related to the Force Factor in a slightly different manner than outlined in the bivariate analyses because in this model relationships are affected by the other variables, given that they are all analyzed together.

Variables are analyzed in a hierarchical OLS regression procedure in which two blocks of variables are entered at separate stages. The first block to be entered consists of variables that are considered legitimate criteria for deciding the appropriate level of officer force. These include the type of

Table 3-8. *Hierarchical OLS Regression of Legitimate and Illegitimate Criteria For Assessing the Level of Officer Force on the Force Factor Scores*

Independent Variables	Coefficient	Standard Error B
Legitimate criteria for force level		
Dangerous calls	0.078	0.073
Impairment	−0.223**	0.078
Subject's initial behavior	−0.026	0.032
Suspect's resistance	−0.515***	0.045
Illegitimate criteria for force level		
Date of hire	−0.017**	0.006
Subject's gender	−0.386***	0.110
Significance of F	0.000	
Adjusted R square	0.234	
Number of cases	676	

* $p < 0.05$; ** $p < 0.01$; *** $p < 0.000$ (two-tailed tests).

call, the initial behavior of the suspect, the suspect's level of resistance, and whether the suspect was high on alcohol or drugs. The second block of (illegitimate) variables to be entered is taken from suspect characteristics (age, gender, and ethnicity), officer characteristics (age, gender, ethnicity, date of hire), and ethnic matches between officers and suspects (i.e., Anglo–Anglo, black–Hispanic, etc.). Entering the two blocks of variables in a hierarchical fashion allows us to discern the relative significance of suspect and officer characteristics, which in a perfect world would be zero. Only the variables deemed to be legitimate criteria for assessing the level of officer force should be significant. Logic dictates that legitimate variables are entered first to act as a control for the other criteria. This allows for a straightforward assessment of the impact of the illegitimate criteria while controlling for variation in the legitimate criteria.

As noted in Table 3-8, the model is not only statistically significant, but the strength of the adjusted R squared indicates that it also explains a significant portion of the variance in the Force Factor (24 percent). Two of the legitimate criteria are statistically significant: the level of the suspect's resistance and whether the suspect was impaired by alcohol or drugs. The higher the level of the suspect's resistance, the lower is the score on the Force Factor, indicating that officers use less force relative to the level of the suspect's resistance. When the suspect's resistance is greater, the ratio of force to resistance is decreased the higher is the level of resistance. In other words, as suspects become more aggressive when resisting, officers may use increasing levels of force, but they actually do so while decreasing the

force/resistance ratio. Encounters involving suspects impaired by alcohol or drugs had lower Force Factor scores, revealing that officers use less force relative to the level of resistance with suspects who are impaired. The conclusion is that officers temper their level of force when they recognize the suspect is not in total control of their behavior.

It is of considerable interest that the only suspect characteristic that affects the Force Factor score after controlling for legitimate factors is the gender of the suspect. Incidents with female suspects had lower scores on the Force Factor, indicating less officer force relative to the level of resistance as compared to incidents involving male suspects. Significantly, there is only one officer characteristic that affects the Force Factor score: the date of hire of the officer. The longer the tenure of the officer in the department, the more force is used relative to the level of resistance offered.

Of note are the variables that were not significantly related to Force Factor, and which therefore do not affect how the level of force is applied. While holding constant the legitimate criteria for considering the level of appropriate force, the age and the ethnicity of the *suspect* are not significant factors in the level of force used against him or her. Gender was the only individual characteristic that was significantly related to the Force Factor score. Likewise, the age and the gender of the *officer* did not significantly affect the Force Factor score. Finally, there were no ethnic matches between officers and suspects that had statistically significant differences on the Force Factor when compared to other ethnic matches. Therefore, when legitimate factors for assessing the level of force to use in a specific situation are controlled, only two illegitimate criteria are significant in the model: the gender of the suspect and the length of tenure of the officer. Further, many may consider the gender of the suspect to be a legitimate criterion for assessing the level of force to use in a situation. If women on the average are less threatening and are less likely to engage in aggressive resistance, then a case can be made for treating women less aggressively than men.

The Benefits of Using the Force Factor in Research

Our goal in developing the Force Factor was to create a practical methodology that could compare measurements of the use of force by police officers against the level of suspect resistance. We illustrated the use of the Force Factor with data from two police departments, with each set of data drawing upon a slightly different sampling of police–citizen encounters. The distribution of Force Factor scores represents a characterization of the use of force for the department. It is important to note that these results approximate a normal curve. Even very general levels of comparison between departments must be interpreted with caution. It is nonetheless instructive to recognize differences between departments, and to assess the reasons for

those differences, which may be the result of one or numerous factors (the selection of incidents included in the data, wording of questions measuring force and resistance, policies and procedures for the use of force, etc.). It is less important for us to make definitive causal determinations than it is to focus attention on more important issues, such as bringing about changes in use-of-force procedures, the reporting of the use of force, or modifications in training highlighted by those differences. Clearly, the greater the similarity in reporting procedures and the measurement of force and resistance, the more appropriate any comparison becomes.

Another important application of the Force Factor is the analysis of use of force within police departments. Comparisons can be made between individual units to highlight differences in the use of force and also to indicate possible reasons for those differences. Officer characteristics, such as tenure with the department, training, and position, can all be compared to gain insight into variations in the use of force found within a department, and can be used to help guide further training and supervision.

Beyond administrative uses, the Force Factor could advance general research on the use of force. As noted in the interpretation of the limited data we used to test the viability of the model, there is a range of factors associated with police use of force: suspect characteristics, officer characteristics, and conditions surrounding the incident. Further study of these factors and others identified as associated with the Force Factor will provide valuable insights into the nature of an officer's use of force relative to a suspect's level of resistance. Our research was limited to those variables found in the police department data, whereas future research should include a broader selection of theoretically relevant variables.

Further Development of the Force Factor

As with any quantitative measure, there are intrinsic limitations to the Force Factor, and there is certainly a need for further refinement and development. For example, the measure may be susceptible to a ceiling effect. When there is no resistance or resistance is minimal, there is greater tendency for a positive factor score because we are subtracting either a small resistance score or zero from the use-of-force score. Conversely, there is a tendency to have a negative force factor score when the resistance scores are very high. However, the benefits undoubtedly outweigh the difficulties a researcher might face in employing this methodology.

As already mentioned, the measurements of suspect resistance and officer use of force in this study have been improved over those used in the 1995 study. The measurements are more detailed, have more categories, and are better anchored to specific behaviors rather than to general categories that require subjective interpretation. The findings, therefore, are

more detailed, more comprehensive, and inherently more reliable. Other improvements of the Force Factor might include linking it to an agency's force continuum and creating graphs for specific units, assignments, or other categories of officers, suspects, or activities. Finally, Force Factors could be created for each sequential action of a police–citizen encounter (Terrill et al., 2003).

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The Sequential Steps in Use-of-Force Incidents in the Miami-Dade Police Department

IN THIS CHAPTER, we review the sequence of actions between officers and suspects from the moment the officer arrives on the scene. This interaction process is key to understanding how situations develop between officers and citizens and how force is used with regard to the interdependent actions (and reactions) of the officers and citizens. What the officer sees the suspect doing, how the officer responds, how the suspect responds to the officer's first action, and how the officer then responds to the suspect, all affect the sequence of events and the levels of suspect resistance and officer use of force. The result may be as benign as an officer peacefully questioning a suspect or as menacing as a deadly shoot-out. This chapter, then, is a first attempt to analyze these interactions in this way. Before we present our analysis, we give a brief discussion of several other attempts to look at the sequence of police–citizen interactions.

Richard Sykes and Edward Brent (1983) analyzed routine police–citizen contacts by looking at encounters and utterances. Their research focused on the three decisions an officer must make in every encounter: defining the situation, ascertaining who is involved, and determining how the encounter should be handled. They observed 1,622 encounters in 1973, and recorded the sequence and temporal order of statements made by officers and civilians that referred to defining, controlling, resisting, and confirming the situation. Based upon the comments made during the encounters, Sykes and Brent (1983) concluded that "police–civilian interaction consists of a series of dyadic interactions occurring within a larger process of dyad formation and dissolution" (p. 177). Their research also showed that a change in an action or response by either of the participants in the course of an interaction can exert influence the other person. Additionally, the roles of police

officers and citizens are different and therefore lead to responses congruent to their status, although both actors ultimately share responsibility for the ongoing interaction and its consequences.

Recently, William Terrill (2003) analyzed the POPN data to examine police use of force and suspect resistance, and concluded as follows:

> Applying force at the outset is no assurance that additional force will not be used. It may be that the initial police force prompted the suspect to resist, thereby requiring additional force on the officers' part. It may also be the case that officers simply continued to use force in an attempt to maintain control of the situation. Nonetheless, the findings indicate that the use of some degree of force at the outset eventually results in force being used again. (Terrill, 2003:77)

He also reported that, generally, as the level of suspect resistance increases, so does the level of the police force. This analysis demonstrated that it is critical to study the actions of police officers and civilians because the use of force is an interactive phenomenon. To treat the actions of officers and citizens as separate limits meaningful analysis. It is therefore necessary to examine these actions as they interface.

This chapter, therefore, examines police use of force and suspect resistance together. Describing the results of the sequential analyses is tedious at best. Each interaction is described by outlining the sequence of actions between the officer and the suspect. The data are presented in detail because this is the first attempt to describe multiple use-of-force encounters by looking at how each actor responded to the other's behavior. This effort attempts to overcome the concerns raised over the years and most recently by Terrill and Mastrofski (2002), who noted,

> Studies that have sought to explain or predict use-of-force decisions have frequently looked at the police–citizen encounter as if it were a single discrete event, without noting the developmental nature over time within that event. Non-observational studies, in particular, have often been lacking in this regard, since *when* during the encounter a citizen's various actions occurred cannot usually be reconstructed. (Terrill and Mastrofski, 2002:223)

The information we present in this chapter provides researchers with an opportunity to understand how these use-of-force interactions unfold and what influences the actors' behaviors.

The Sequence of Events

The sequence of events occurring when the officer arrives on the scene is of great interest when examining police–citizen interactions. What does

Table 4-1. *The Suspect's Level of Resistance in Sequential order[a]*

	1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th
Cooperative/	364	66	63	39	31	22	12	12	1	1
no resistance	54%	10%	11%	9%	11%	15%	15%	31%	20%	33%
Verbal non-	152	215	122	64	33	13	13	5	2	—
compliance	23%	33%	21%	15%	12%	9%	16%	13%	40%	33%
Defensive	120	235	185	147	114	51	26	11	1	—
resistance	18%	36%	32%	33%	42%	35%	32%	28%	20%	—
Active	26	120	190	180	91	58	30	11	1	1
resistance	4%	18%	33%	41%	33%	40%	37%	28%	20%	33%
Aggravated	7	6	11	6	5	2	1	—	—	—
active resistance	1%	1%	2%	1%	2%	1%	1%	—	—	—
Active resistance,	4	10	13	4	1	—	—	—	—	—
deadly weapon	<1%	2%	2%	<1%	<1%	—	—	—	—	—

[a] The number of "active" cases declines with each action. The percentage figures refer to the number of cases that have not been resolved, either by release or by taking the suspect into custody.

the officer see the suspect doing? How does the officer respond? How does the suspect respond to the officer's first action, and so on? It is within this very important interactive process that suspect resistance and an officer's use of force develops. The result may be as benign as an officer peacefully questioning a suspect, or as menacing as a deadly shoot-out.

This first analysis involves the sequence of events occurring when officers arrive at a scene and approach suspects. It is within this very important interaction process that suspect resistance and an officer use of force develops. We discuss the sequential order of actions, and include levels of force and resistance in our examination.

The data on the level of suspect resistance and officer use of force in their sequential order are presented in Tables 4-1 through 4-3. In Table 4-1, we can see that the suspect's first action to the officer was usually cooperative (54 percent) or involved verbal noncompliance (23 percent) or defensive resistance (18 percent). In only 4 percent of the cases did the suspect actively resist during the initial conduct. Only 1 percent of suspects engaged in aggravated active resistance, and less than 1 percent used a deadly weapon. During the suspect's second action, in response to the officer's first action, there was more resistance. Thirty-three percent of the suspects engaged in verbal noncompliance and 36 percent resisted defensively, and active resistance jumped to 18 percent. However, only 1 percent of the responses were aggravated active resistance, and 2 percent of suspects used a deadly

Table 4-2. *The Officer's Level of Force in Sequential Order[a]*

	1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th
Presence/	441	148	62	19	9	3	1	1	—	—
verbal directive	66%	23%	11%	5%	4%	2%	1%	4%	—	—
Strong verbal	168	259	151	79	35	17	14	5	2	1
order	25%	40%	27%	20%	15%	14%	19%	20%	40%	50%
Forcibly subdued,	47	185	267	237	156	80	41	14	3	1
defensive	7%	29%	48%	59%	65%	65%	56%	56%	60%	50%
Forcibly subdued,	3	24	34	39	16	12	5	2	—	—
offensive	<1%	4%	6%	10%	7%	10%	7%	8%	—	—
Intermediate	13	22	31	29	23	12	11	3	—	—
weapon	2%	3%	6%	7%	10%	10%	15%	12%	—	—
Deadly	1	7	9	2	1	—	1	—	—	—
force	<1%	1%	2%	<1%	<1%	—	1%	—	—	—

[a] See Table 4-1, footnote *a*.

weapon. In the third suspect action, active resistance increased to 33 percent. Aggravated active resistance increased to 2 percent, and resistance with a deadly weapon accounted for another 2 percent of the cases. The level of active resistance peaked at nearly 41 percent of the cases during the fourth suspect action, although aggravated resistance and resistance with a deadly weapon remained approximately 1 percent. By the fifth suspect action, active resistance began to decline (33 percent); however, defensive resistance climbed to 42 percent. After the fifth suspect action, resistance with a deadly weapon ceased to be a threat; after the seventh action, there was no more aggravated active resistance. Active resistance declined rapidly at this point. Suspects tended to increase their level of resistance as sequences of the interaction unfolded.

Most officers began the encounter with suspects by using verbal directives (66 percent) or giving strong verbal orders (25 percent) (see Table 4-2). Less than 8 percent began their first action by forcibly subduing the suspect, either defensively (7 percent) or offensively (<1 percent). Two percent used an intermediate weapon as their first action, and only one (<1 percent) used deadly force. During the second action, officers shifted to strong verbal orders (40 percent) or forcibly subdued the suspect defensively (29 percent), presumably because the suspect did not respond to the first action. Subduing the suspect offensively jumped to 4 percent, use of an intermediate weapon increased to 3 percent, and use of deadly force increased to 1 percent of the cases. By the third officer action, 48 percent of the officers
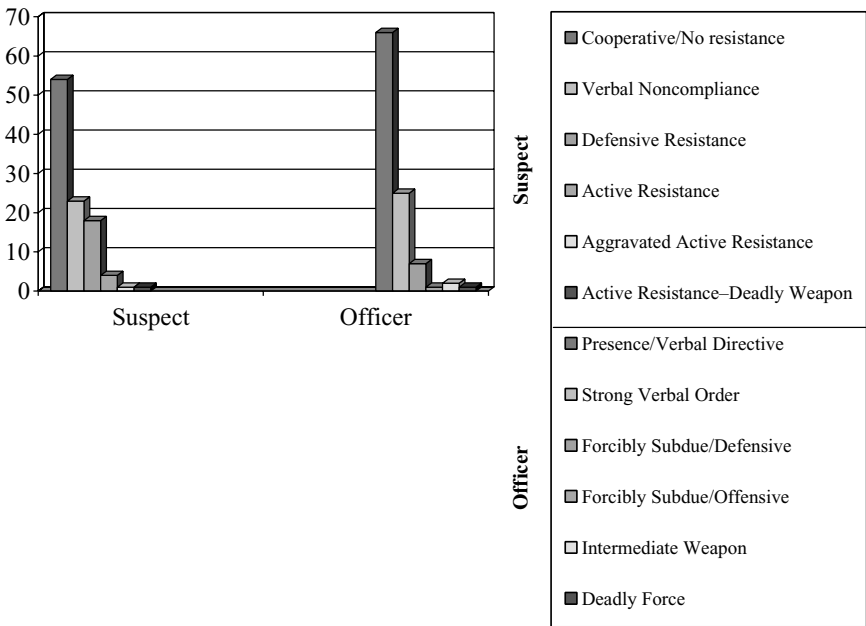
Figure 4-1. First action, percentage and type of resistance.

shifted to forcibly subduing the suspect defensively. Subduing the suspect offensively increased to 6 percent, use of an intermediate weapon jumped to 6 percent, and use of deadly force increased to 2 percent. During the officer's fourth action, defensive force increased to 59 percent, offensive force to 10 percent, and use of intermediate weapons to 7 percent, and use of deadly force decreased to less than 1 percent. By the fifth and sixth actions, officers increased their use of defensive force to 65 percent and of offensive force and intermediate weapons to around 10 percent each, and there was only one instance of deadly force. After the sixth action, most use of force dropped off quickly, except for use of intermediate weapons, which increased to 15 percent during the seventh action and to 12 percent during the eighth action. Very few cases made it beyond eight officer actions.

Figures 4-1 through 4-5 graphically compare the data reported in Tables 4-1 and 4-2. Although there are variations in patterns from sequence to sequence, overall, it becomes clear that the levels of police use of force do not exceed the levels of suspect resistance. The following section reports the relative difference between the levels of police use of force and the levels of suspect resistance in sequence, that is, the Force Factor.
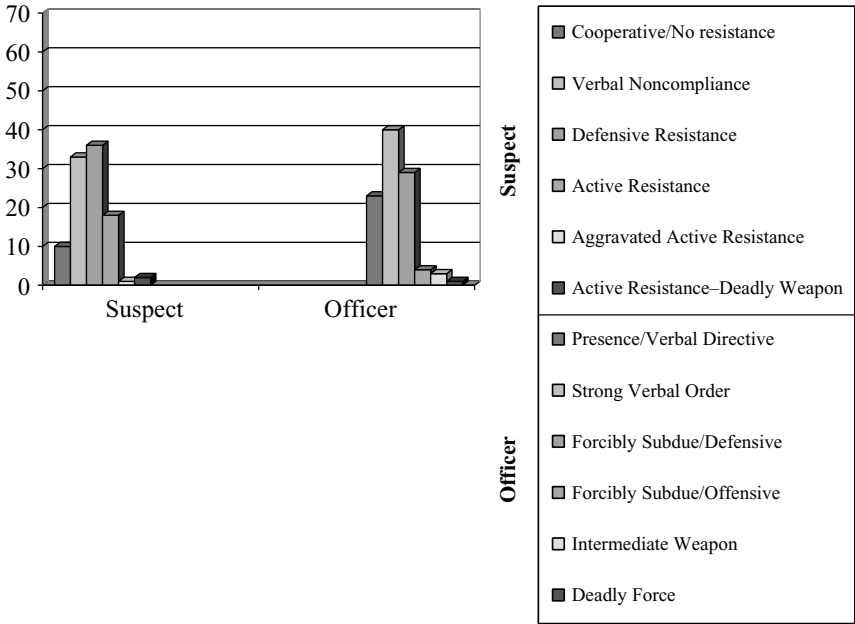
Figure 4-2. Second action, percentage and type of resistance/force.
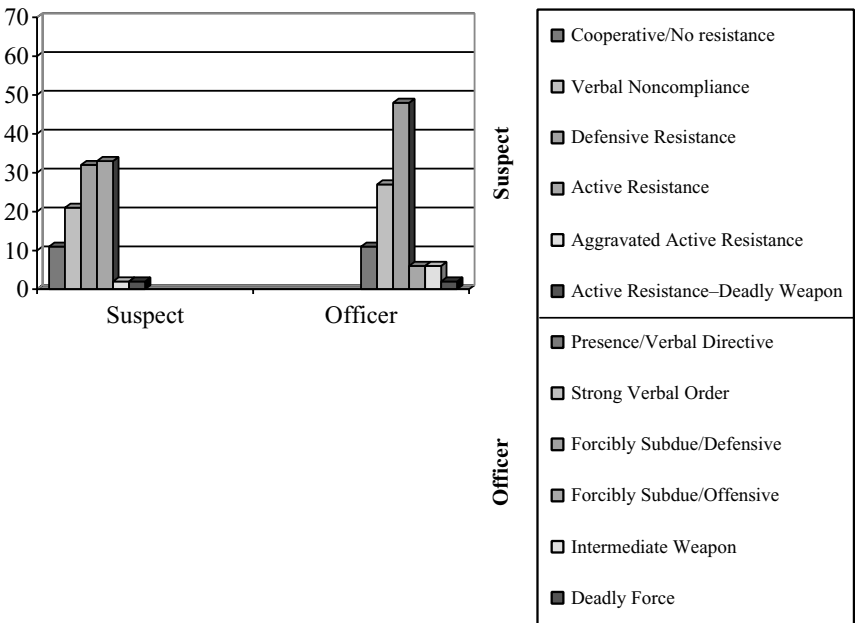

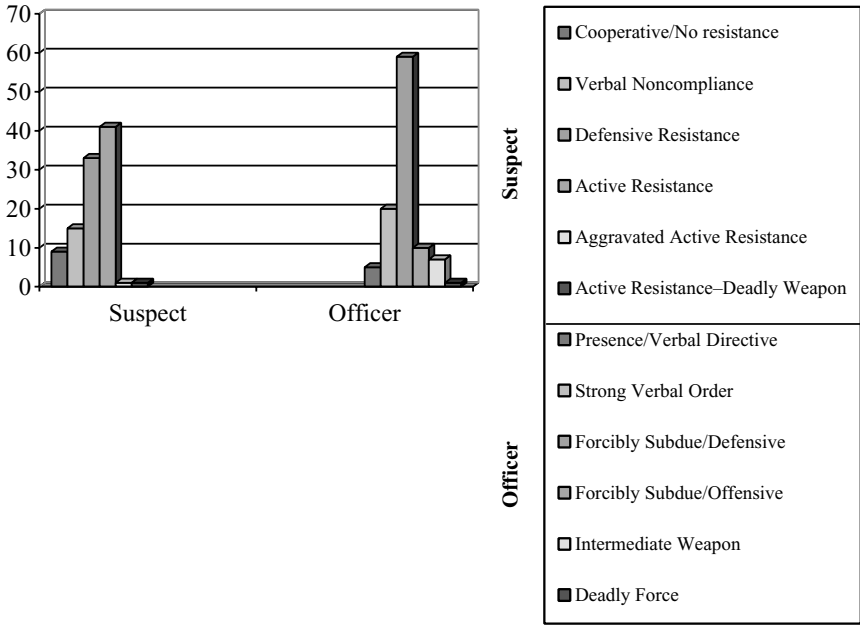**Figure 4-3.** Third action, percentage and type of resistance/force.

Figure 4-4. Fourth action, percentage and type of resistance/force.

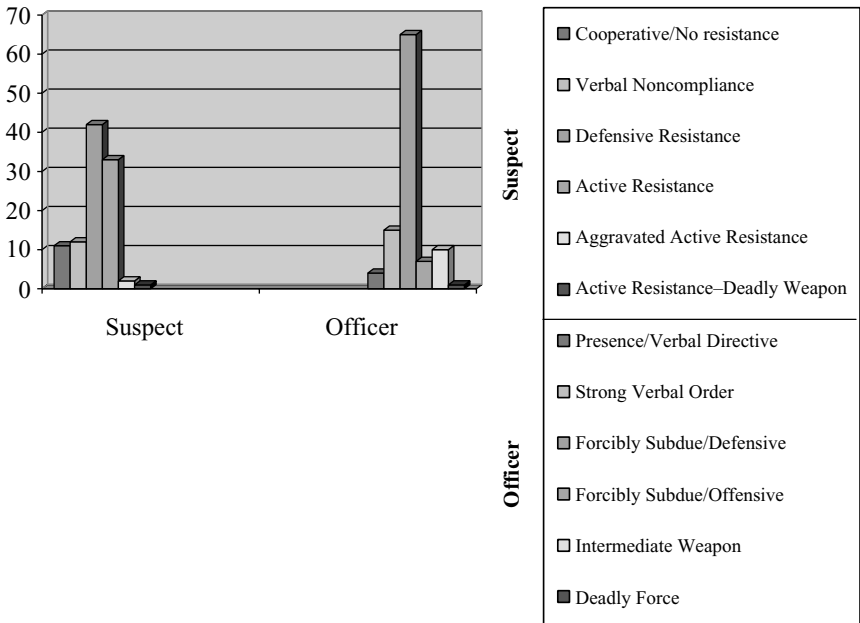**Figure 4-5.** Fifth action, percentage and type of resistance/force.

Table 4-3. *Force Factor Distributions and Means for the Sequence of Actions* [a]

	1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th
−5	3 (<1%)	3 (<1%)	2 (<1%)	—	—	—	—	—	—	—
−4	1 (<1%)	1 (<1%)	3 (<1%)	2 (<1%)	—	—	—	—	—	—
−3	4 (<1%)	5 (<1%)	10 (2%)	2 (<1%)	2 (<1%)	—	—	—	—	—
−2	52 (8%)	60 (9%)	39 (7%)	24 (6%)	14 (6%)	6 (5%)	4 (6%)	1 (4%)	—	—
−1	147 (22%)	242 (38%)	194 (35%)	151 (37%)	73 (30%)	39 (32%)	21 (29%)	10 (40%)	1 (20%)	1 (50%)
0	390 (58%)	257 (40%)	207 (37%)	160 (40%)	107 (45%)	54 (44%)	25 (34%)	7 (28%)	2 (40%)	1 (50%)
1	64 (10%)	56 (9%)	82 (15%)	52 (13%)	30 (13%)	23 (19%)	15 (21%)	3 (12%)	2 (40%)	—
2	10 (2%)	16 (3%)	13 (2%)	11 (3%)	9 (4%)	2 (2%)	6 (8%)	3 (12%)	—	—
3	—	4 (<1%)	3 (<1%)	3 (<1%)	5 (2%)	—	1 (1%)	1 (4%)	—	—
4	2 (<1%)	1 (<1%)	—	—	—	—	1 (1%)	—	—	—
5	—	—	—	—	—	—	—	—	—	—
Number	673	645	553	405	240	124	73	25	5	2
Mean	−0.28	−0.45	−0.37	−0.32	−0.18	−0.19	−0.07	0.00	0.20	−0.50
Number (percent) ending	28 (4%)	92 (14%)	148 (22%)	165 (25%)	116 (17%)	51 (8%)	48 (7%)	20 (3%)	3 (<1%)	2 (<1%)

[a] See Table 4-1, footnote *a*.

Force Factor Scores across the Sequence of Actions

In Table 4-3, the scores on the Force Factor are shown across the sequence of actions (the frequencies are presented in the Appendix). This analysis allows us to assess the level of force used by the officer relative to the level of resistance given by the suspect for each of the actions in the sequence and also to compare these to other actions in the sequence. The table includes the distribution of scores of the Force Factor, the mean score, and the percentage of cases ending at each stage of the sequence. Most cases proceed to the third, fourth, or fifth stage. Forty percent of the cases are terminated by the third stage, 65 percent by the fourth stage, and 82 percent by the fifth stage. The Force Factor means are mostly negative, but most negative at the

second stage (meaning less officer force than suspect resistance at −0.45) and then taper off to the zero point by the eighth stage. Approximately 90 percent of the cases are either at the zero point (commensurate force), one, or minus one throughout all the stages. This means that in the vast majority of the cases throughout the sequence, officers maintain a level of force that is very close to the level of resistance given by the suspect. In only about 10 percent of the cases does the force/resistance balance deviate into extreme negatives or positives, and most of the deviations are on the negative side, with officers deploying less force than suspects deploy resistance. In most of the stages, only 2 or 3 percent of the cases deviate beyond one in the positive range of scores. The exceptions are all in the latter stages of the officer–suspect interaction sequence (fifth, seventh, and eighth stages), which likely indicates that suspects failed to respond to several attempts on the part of officers to control them.

Dyadic Interactions

In the following section, descriptions of actions and reactions between the officer and the suspect at specific stages of the sequence are analyzed. Examining the entire progression of actions and reactions simultaneously can be difficult and confusing. The analysis is complex, but follows a definite pattern. Therefore, we focus the following analysis on specific stages of the interaction process to allow the assessment of factors that influence the behaviors or actions of each member of the dyad. Specifically, we analyze behavioral patterns ranging from verbal actions and verbal reactions to forceful actions and forceful resistance by using a series of independent variables.

Because few interactions involved lengthy exchanges, we limited out analysis to dyadic interactions from the first five actions of both the officers and the suspects. The dependent variable, use of force, was originally subdivided into six levels, but for the sequential analysis it was recoded as force or no force, including verbal coercion. Independent variables were selected from the range of information collected on the use-of-force forms, which also had to be recoded.

Independent Variables

As discussed in Chapter 3, the different calls for service (original call or signal) were recoded into seven different groups: administrative, traffic, property offense, violent crime, domestic disturbance, drug/alcohol offense, and other. Age was recoded into two different groups: less than thirty years old and more than thirty years old. The ethnicity of the suspect was divided into four categories, Hispanic, Anglo, African American, and "other," and

it was computed by combining elements of the race and ethnicity vari-
ables. Impairment and resistance of the suspect were changed to dichoto-
mous variables labeled yes or no, and nonviolent or violent, respectively.
Injuries received were divided into three categories: minor, major, and other.
The method of force was divided into five categories: physical, instrument,
firearm, other, and no force. The ethnicity of officers was divided into the
same categories as that of suspects. The unit in which an officer worked
was changed to a dichotomous variable: (1) uniform unit or K9 and (2)
other. Finally, the variable describing experience of the officer had three
categories: less than five years of experience, between five and ten years of
experience, and more than ten years of experience.

Analysis

After the variables were recoded, statistical analyses were performed using
cross-tabulations to explain any differences between officer and suspect ac-
tions based on the list of variables. The analysis is presented in two stages:
First, the specific actions for each actor are presented, and then dyads are
organized by recoding the information into force versus no-force sequences,
and are analyzed with a set of independent variables.

After recoding the officer and suspect information, we divided the data
into sequences of interactions. The first series involved a verbal action by the
officer and a verbal action by the suspect. There were 499 interactions that
began this way. In the second series, the first action of the officer was verbal
and the first action of the suspect was physical. One hundred and seven
interactions were included in this category. The third series began with a
physical first action by the officer and a verbal first action by the suspect.
There were 14 interactions in this group. In the fourth series, actions by both
the officer and suspect were physical. This category included 50 interactions.

Three more sequences were added to document the additional actions
and responses of officers and suspects after the first set of interactions. Dyad
2 in this second group shows the second actions of the officer and suspect.
Each second dyad contains the same four possible actions as the initial
series. Dyad $2 = 1$, therefore, has a second action of both the officer and a
suspect that is verbal. Dyad $2 = 2$ is when the second action of the officer
is verbal and second action of the suspect is physical. Dyad $2 = 3$ is when
the second action of the officer is physical and the second action of the
suspect is verbal. Dyad $2 = 4$ is when the second actions of both the officer
and the suspect are physical. Dyad 3 contains the possible third actions of
the officer and suspect following dyad $2 = 1$. Dyad 4 represents the third
actions of the officer and suspect following dyad $2 = 2$. Dyad 5 contains the
third actions of the officer and suspect following dyad $2 = 3$. Finally, dyad
6 contains the various third actions of the officer and suspect following

dyad 2 = 4. The sequential actions of all subsequent dyads follow the same order: officer/suspect-verbal; officer-physical, suspect-verbal; officer-verbal, suspect-physical; and officer/suspect-physical. Due to cell sparseness and missing data, fourth, fifth, and sixth actions by both officer and suspect did not produce any results worth reporting.

Series 1: First Officer Action Is Verbal, First Suspect Action Is Verbal

Our analysis of the data attempted to determine whether any independent variables were related to officer and suspect responses to each other in any of the series of interactions. There were 499 cases of police–citizen contact that initially began with verbal actions by both the officer and the suspect. To help understand these complex relationships, we adopted a simple set of notations. Dyads are noted in sequence. For example, dyads are the first number noted and represent the number of action(s). The second number represents the dyadic interaction.

Calls for Service

Administrative

Twenty-three percent of administrative calls in which there was use of force began with initial verbal actions by both suspect and officer. When the second actions of both officer and suspect were also verbal (dyad 2 = 1), the percentage of calls ending in force remained at 23 percent. Seventeen percent of the use-of-force cases included the second action of the officer as physical and the second action of the suspect as verbal (dyad 2 = 2). Force was used in 23 percent of the cases when the second action of the officer was verbal and the second action of the suspect was physical (dyad 2 = 3) and also when second actions by the officer and suspect were both physical (dyad 2 = 4).

When the third actions of the officer and suspect were verbal (dyad 2 = 1), force resulted in 28 percent of the cases. When the third action of the officer was physical and the third action of the suspect was verbal, force resulted in 13 percent of the cases. When the third action of the officer was verbal and the third action of the suspect was physical, force resulted in 23 percent of the cases. Finally, force was used in 21 percent of the cases when the third actions of both officer and suspect were physical. Because of missing data, no third action by either the officer or the suspect produced any significant changes in the use of force following dyad 2 = 3.

When an officer responded to administrative calls, 47 percent of the cases ended in force for verbal third actions after dyad 2 = 2. This was a 24 percent

increase from the figure found in the initial police–citizen encounter, which was 23 percent. Following the same sequence, third actions in which the officer was verbal and the suspect became physical led to an 11 percent decrease in force from the original encounter. Sixteen percent of the cases ended in force when the third action of the officer was physical and the third action of the suspect was verbal. This was a small decrease of 4 percent in the number of use-of-force cases from the first interaction. When the third actions of both officer and suspect were physical, force was used in 24 percent of the cases, a 4 percent increase from the original percentage. Due to missing data, no analysis of fourth actions was conducted.

Traffic Violation Calls

When the original call or activity was for a traffic violation, initial verbal actions by both officer and suspect resulted in 14 percent of cases ending in the use of force. When the second actions of both officer and suspect remained verbal, force was used in 15 percent of the cases. When the second action of the officer was physical and the suspect action was verbal, force was used in 22 percent of the cases. When the second action of the officer was verbal and the suspect's second action was physical, force was applied in 13 percent of the cases. When the second actions of both officer and suspect were physical, force was used in 12 percent of the cases. Force was used in 21 percent of the cases when the third actions of both officer and suspect were verbal, following two previous verbal actions by both. When the third action of the officer was physical and the suspect remained verbal, force was used in 7 percent of the cases. When the third action of the officer was verbal and the suspect became physical, force was applied in 11 percent of the cases. Force was employed in 13 percent of the cases when the third actions of both officer and suspect were physical. There were no noteworthy results for any of the other various sequential third actions, due to missing data.

Property Offense Calls

When the original call or signal was for a property offense and both suspect and officer initially responded verbally, force was used in 9 percent of the cases. When the second actions of both officer and suspect remained verbal, 8 percent of all property offense calls ended in force. When the second action of the officer was physical and the suspect remained verbal, force was used in 9 percent of these cases. Ten percent of property offense violations ended in force when the second action of the officer remained verbal and the suspect's second action was physical. Finally, when the second actions of both officer and suspect were physical, force was used in 9 percent of the cases. Force was used in 3 percent of the cases when third actions by both the

officer and the suspect were also verbal. No other sequential third actions produced any large increases or decreases in the percentage of cases that resulted in force being used.

Violent-Crime Calls

The analysis of calls for service for violent crime did not produce any noteworthy results for the various second and third actions by officer and suspect following two previous verbal actions by both officer and suspect, or following initial verbal actions by both officer and suspect and a verbal second action by the officer and a physical second action by the suspect. However, following a physical second action by the officer and a verbal second action by the suspect, there were some noteworthy results. Under these circumstances, verbal third actions by both officer and suspect ended in force being used 20 percent of the time, which is a 12 percent decrease in use-of-force cases from the original figure of 32 percent. When the third action of the officer was verbal and the suspect became physical, force was used in 55 percent of the cases, a 23 percent increase from the original figure of 32 percent. The percentage of cases ending in the use of force increased to 48 percent when the third action of the officer was physical and the suspect remained verbal. Twenty-four percent of cases ended in force when both officer and suspect third actions were physical. This was a moderate 8 percent decrease in the use of force found in the initial police–citizen interaction. There were no noteworthy results in the percentage of use-of-force cases involving third actions of the officer and suspect following initial verbal actions by both and physical second actions by both.

Domestic Disturbance Calls

Domestic disturbances calls showed noteworthy disparities for cases involving the use of force. Thirteen percent of all domestic disturbance calls that resulted in force being used began with verbal actions on behalf of both officer and suspect. Seventeen percent of the cases that ended with the use of force were the result of verbal second actions by both officer and suspect. When the second action of the officer was verbal and the second action of the suspect was physical, 17 percent of these cases also ended in the use of force. When the suspect's second action remained verbal and the officer's second action was physical, force was applied in 10 percent of the cases. In instances where second actions of both officer and suspect were physical, cases involving the use of force decreased to only 7 percent. When the third action of both officer and suspect remained verbal following two previous verbal actions by officer and suspect, force was used in 14 percent of the cases.

When the third action of the officer became physical and the suspect remained verbal after verbal first and second actions, 20 percent of the cases involved the use of force. The percentage of cases involving force remained constant (did not fluctuate more than four or five percentage points) for all the remaining combination of officer–suspect interactions. Due to missing data on domestic disturbance calls for service, no other sequential third actions produced significant increases or decreases in use-of-force incidents.

Age of Suspect

A suspect's age affected the percentage of cases resulting in force. The percentage of cases that ended in force for suspects less than thirty years of age that initially began with verbal actions by both officer and suspect was 56 percent. This percentage was similar throughout the various second and third actions of the officer and the suspect. One sequence of actions that differed drastically was when the third action of the officer was physical and the third action of the suspect was verbal following two previous verbal actions. In this sequence, force was used in 21 percent of the cases, a 35 percent decrease in the use of force since the first verbal encounter. These results were reversed with suspects more than thirty years of age.

When suspects more than thirty years of age initially responded verbally to an officer and the officer reciprocated verbally, force resulted in 44 percent of the cases. Once again, this percentage was constant throughout all the various second and third actions until the third action of the officer was physical and the second action of the suspect was verbal, preceded by two sets of verbal actions. In this scenario, the percentage of cases involving force increased to 79 percent, a 35 percent increase from initial verbal responses by both officer and suspect.

No noteworthy results were found when analyzing a suspect's age in conjunction with the third actions of the officer and suspect following initial verbal actions by both and a verbal second action by the officer and a physical second action by the suspect. Third actions by an officer and suspect following a physical second action by the officer and a verbal second action by the suspect led to significant changes. For suspects less than thirty years of age, 27 percent of incidents following this sequence ended in force when the third actions of both officer and suspect were verbal. This was a 19 percent decrease in force incidents from the original percentage of 56 percent found in the initial police–citizen encounter. Third actions in which the officer's action remained verbal and the suspect became physical resulted in force being used in 55 percent of the cases. There was a 12 percent decline in cases ending in force being used for suspects less than thirty years of age when the third action of the suspect was verbal and the third action of the officer was physical. Finally, the percentage of cases ending in force when

the third actions of both officer and suspect were physical increased by 9 percent.

In use-of-force cases involving suspects more than thirty years old, 73 percent of the incidents ended in force when the third actions of both officer and suspect were verbal following a physical second action by the officer and a verbal second action by the suspect. This was a 29 percent increase in cases since the initial encounter. Forty-six percent of the cases in this sequence ended in force being used when the third action of the officer was physical and the third action of the suspect was verbal. There was a 12 percent increase in the use-of-force cases when the third action of the officer was physical and the suspect remained verbal. Finally, the percentage of cases resulting in the use of force decreased by 9 percent from the initial police–citizen encounter when the third actions of both officer and suspect were physical. Third actions involving officers more than and less than thirty years of age did not produce any noteworthy results following initial verbal action and second physical actions by both officer and suspect.

Ethnicity of Suspect

Anglo Suspects

When an Anglo suspect was involved, the percentage of cases resulting in force being used when both officer and suspect initially responded verbally was 52 percent. When the second action of the officer and the second action of the suspect remained verbal, the percentage of use-of-force cases remained consistent, increasing only to 56 percent. However, when the second action of the officer was physical and the second action of the Anglo suspect was verbal, the percentage of cases involving use of force increased to 65 percent, a 13 percent increase.

The number of cases ending in force decreased after the foregoing sequence of actions and fluctuated within five percentage points in all further actions until the third action of the officer was physical and the third action of the suspect was verbal. When this scenario occurred, the percentage of cases involving force increased again to 67 percent, a 15 percent increase in use-of-force incidents from the original officer–suspect encounter.

Due to missing data, no significant fluctuations in the frequency of the use of force were found for third actions of the officer and Anglo suspects following initial verbal actions by both and a verbal second action by the officer and a physical second action by the suspect. However, there were changes in the use of force for other sequences of third actions involving Anglo suspects. When the third actions of the officer and a Anglo suspect were verbal following verbal first actions by both and a physical second action by the officer and a verbal second action by the suspect, the percentage

of cases using force at this sequence decreased by 27 percent from the original figure of 54 percent. Under the same scenario of first and second actions, a verbal third action by an officer and a physical third action by the suspect resulted in force being used in 36 percent of these actions, an 18 percent decline. When the third action of the officer was physical and the Anglo suspect remained verbal, use of force resulted in 44 percent of these sequences, a 10 percent decrease from the initial percentage. Finally, when the third actions of both officer and suspect were physical, the percentage of cases resulting in the use of force was 65 percent, an 11 percent increase from the 54 percent found in the original police–citizen encounter. The only other notable change in incidents involving Anglo suspects was when there was a physical third action by officers and a verbal third action by suspects following initial verbal actions and physical second actions by both. Under these circumstances, 27 percent of the cases included the use of force, a 27 percent decline from the first actions by both actors.

African-American Suspects

In use-of-force cases involving African-American suspects, second and third actions in which the officer became physical and the suspect remained verbal produced opposite results to those involving Anglo suspects. Initial verbal responses by both officer and suspect involving African-American suspects resulted in 48 percent of the cases ending in force. This percentage is consistent throughout all the various second and third actions of both officer and suspect, only deviating within 5 to 10 percentage points of the initial police–citizen encounter figure of 48 percent. However, when the second action of the officer became physical and the second action of the suspect remained verbal, force was used in 35 percent of the cases, a 13 percent decrease. The percentages in use-of-force incidents are constant through the various sequences of actions (fluctuating within 5 or 6 points of the original 48 percent) until the third action of the officer was physical and the third action of the suspect was verbal. In this instance, the percentage of cases involving force decreased to 33 percent, a 15 percent change in the use of force.

Other sequential third actions involving African-American suspects influenced the use-of-force in this sequence. When there were verbal third actions by both officer and suspect following verbal first actions by both and physical second actions by the officer and verbal second actions by African-American suspects, the percentage of cases using force in this sequence was 73 percent, which was a 27 percent increase in the number of force incidents from the figure of 46 percent found during the initial verbal actions. Under the same scenario of first and second actions, third actions in which the officer remained verbal and the suspect became physical resulted in force being used in 64 percent of the cases, an 18 percent increase from the first

part of the encounter. With physical third actions by the officer and verbal third actions by African-American suspects, the percentage of use-of-force incidents only increased by 6 percent. Finally, physical third actions by both officer and suspect used force in this sequence 51 percent of the time, an even smaller increase of 5 percent. The only large increase or decrease in force incidents involving African-American suspects following initial verbal actions by officer and suspect and physical second actions by both was when the third action of the officer was physical and the third action of the suspect was verbal. In this scenario, force was used in 73 percent of the cases, a 27 percent increase from the number of incidents found in verbal first actions by both officer and suspect.

There were only two ethnic backgrounds in which the number of cases ending in force was influenced by the actions of the officer and suspect.

Hispanic Suspects

Forty-one percent of incidents involving suspects of Hispanic descent ended in force after the suspect and officer initially responded verbally. This figure increased by 26 percentage points to 67 percent when the second action of the officer was physical and the second action of the suspect was verbal. When the third action of the officer was physical and the third action of the suspect was verbal following two previous verbal actions by suspect and officer, the percentage of cases involving use of force was 27 percent. This was a 14 percent decrease in the number of use-of-force cases from the first interaction between officer and suspect. There were no other large fluctuations in the percentages of use-of-force incidents for any other third actions involving Hispanic suspects.

"Other"

In the ethnicity category "other," the percentage of cases resulting in force decreased by 16 percent from the initial police–citizen interaction percentage (43 percent) when the second action of the officer was physical and the second action of the suspect was verbal. When the third actions by both officer and suspect were verbal following initial verbal actions by both and a physical second action by the officer and a verbal second action by the suspect, force was used in 70 percent of the cases. This was an increase of 27 percent from the original percentage. Under the same first and second action scenario, there was also a 24 percent increase in force cases from the first encounter between officer and suspect when the third action of the officer was verbal while the suspect became physical. The percentage of cases ending in force being used increased by 18 percent from the original figure for a physical third action by the officer and a verbal third action

by the suspect, and for when there were two physical third actions by both
actors.

Gender of Suspect

There were no major increases or decreases involving use-of-force cases
between male and female suspects.

Impaired and Unimpaired Suspects

Impaired Suspects

Incidents in which the suspect was impaired and both officer and suspect
interacted verbally in the initial contact resulted in use of force 35 per-
cent of the time. When the second action of the officer was physical and
the impaired suspect maintained a verbal response, the percentage of cases
ending in the use of force decreased to 41 percent. Thus, the frequency of
force used against an impaired suspect decreased in this sequence. (When
the suspect was not impaired, the percentage of cases ending in the use of
force was 63 percent). When the second action of the officer was physical
and the suspect remained verbal, the number of cases resulting in force in-
creased by 13 percent, a distinct difference from interactions with impaired
suspects.

Unimpaired Suspects

For unimpaired suspects, various sequential third actions by officer and
suspect affected the frequency of applied force. Following verbal first actions
by both officer and suspect and a physical second action by the officer and a
verbal second action by the suspect, third actions in which both the officer
and suspect responded verbally resulted in the use of force in 60 percent
of the cases. This was a 17 percent increase in use-of-force cases from the
original figure. With the same two sequences, third actions in which the
officer responded verbally and the suspect responded physically ended with
force in 73 percent of the cases, a 30 percent increase. There was a 29
percent increase in force incidents when the third action of the officer was
physical and the third action of the suspect was verbal. Finally, when the
third actions of both officer and suspect were physical, the percentage of
use-of-force incidents increased by 21 percent from the initial encounter.

   Another sequence of third actions involving unimpaired suspects pro-
vided some notable fluctuations among the percentage of force cases. After
verbal first actions by both officer and suspect and physical second actions
by both officer and suspect, the percentage of cases ending in force when

the third action of the officer was verbal and the suspect became physical was 60 percent, a 17 percent increase. Third actions in which the officer became physical and the suspect remained verbal in this sequence resulted in force in 64 percent of the cases, a 21 percent increase. Finally, when the third actions of both officer and suspect were physical, the percentage of cases where force was used increased by 16 percent.

Suspect Resistance

Nonviolent Resistance

When a suspect resisted the police nonviolently, only certain sequences of third actions influenced the percentage of cases resulting in force. In incidents involving nonviolent resistance when both officer and suspect initially responded verbally, force resulted in 37 percent of the cases. This figure fluctuated slightly (by only 5–10 percent) throughout all the second actions by the officer and the suspect.

When the officer's third action was physical and the suspect's third action was verbal, the percentage of cases ending in force increased by 20 percent. Verbal first actions by both officer and suspect and verbal second actions by the officer and physical second actions by the suspect led to an 18 percent increase in incidents involving the use of force in the third sequence. For the same first and second actions, the percentage of cases ending in force increased by 28 percent when the third action of the officer was physical and the third action of the suspect was verbal.

Third actions in which the officer remained verbal and the suspect became physical following verbal first actions and physical second actions by both ended in force 60 percent of the time, a 24 percent increase from the initial encounter between officer and suspect. There was a similar 28 percent increase in use-of-force incidents in which the third action of the officer was physical and the third action of the suspect was verbal. Finally, the percentage of cases resulting in force decreased to 27 percent from 37 percent found in the initial verbal encounter.

Violent Resistance

When a suspect resisted the police violently, the analysis of various third actions by the officer and the suspect led to results that were in direct contrast to the results found in the analysis of nonviolent resistance by suspects. When the first actions by both officer and suspect were verbal, force was used in 63 percent of the cases. There were no significant increases or decreases in the number of cases involving the use of force for any of the sequential secondary actions, but when the third action of the officer was verbal and

the third action of the suspect was physical, following verbal first and second actions by both officer and suspect, there was a 20 percent increase in use-of-force incidents compared to a decrease in cases of nonviolent resistance. When the third actions of both officer and suspect were physical in this sequence, the percentage of cases ending in force increased to 78 percent, a 15 percent increase from the initial encounter.

After a verbal first action by both officer and suspect and a verbal second action by the officer and a physical second action by the suspect, the percentage of cases at the third sequence ending in force decreased by 16 percent from the percentage found in the initial verbal encounter. When the police encountered violent suspect resistance in which the third action by the suspect was verbal and the third action of the officer was physical after a verbal first action by both officer and suspect and a physical second action by the officer and verbal second action by the suspect, force was used in 36 percent of the cases, which was a 27 percent decrease from the first interaction between officer and suspect.

Finally, in the sequence of verbal first actions and physical second actions by both officer and suspect, verbal third actions by the officer and physical third actions by the suspect resulted in 40 percent of the cases ending in force being used. This was a 23 percent decrease in use-of-force incidents from the initial verbal interaction. The percentage of cases ending in force decreased by 27 percent when the third action of the officer was physical and the third action of the suspect was verbal. When both actors used physical third actions, 74 percent of the cases resulted in force, an 11 percent increase from the number found during the first verbal exchange between an officer and a suspect.

Officer Ethnicity

Anglo Officers

After verbal first and second actions by both officer and suspect when an Anglo officer's third action was physical and the suspect's third action was verbal, force was used in 79 percent of the sequences. This was a 17 percent increase in force incidents from the initial verbal action between both actors. After an initial verbal interaction followed by a physical second action by the officer, a verbal second action by the suspect, and a third verbal action by both, force resulted in 71 percent of the cases. This computed to a 23 percent increase from the initial figure of 58 percent. For the same sequence of first and second actions, 84 percent of the cases involved force after a physical third action by the Anglo officer and a verbal third action by the suspect.

The sequence of third actions following verbal first actions and physical second actions by both an Anglo officer and a suspect produced some significant changes. A verbal third action by the officer and a physical third action by the suspect resulted in force 80 percent of the time. This amounted to a 22 percent increase in force cases from the initial verbal encounter. A physical third action by the officer and a verbal third action by the suspect resulted in a 22 percent decrease in force cases since the original encounter.

The ethnicity category of "other" produced dramatic increases or decreases for a few sequences of actions. When the officer's second action was physical and the suspect's second action was verbal, force resulted in 38 percent of the cases. This was a 20 percent decrease in the amount of cases from the figure of 59 percent found after the initial verbal interaction. The analyses of third actions found that when the officer's third action was verbal and the suspect's third action was physical, the amount of cases involving force increased by 19 percent.

Hispanic Officers

The significant sequence for Hispanic officers was after initial verbal actions by both officer and suspect and physical second actions by the officer and verbal second actions by the suspect. When the third actions of both officer and suspect were verbal, the percentage of cases ending in force decreased by 18 percent from the original police–citizen encounter. When the third action of the Hispanic officer was verbal and the suspect became physical, there was a 21 percent increase in use-of-force cases. There was a 13 percent decrease when the third action of the officer was physical and the suspect remained verbal.

Thirty-four percent of all Hispanic officers were involved in use-of-force cases when the initial action by both officer and suspect was verbal. When the second action of the officer was physical and the second action of the suspect was verbal, the percentage of cases ending in force increased by 16 percentage points to 50 percent. This was the same percentage found when the officer's third action was physical and the suspect's third action was verbal following two previous verbal actions by both officer and suspect. There was a 23 percent decrease in cases resulting in force when the third action of the officer was verbal and the third action of the suspect was physical.

African American Officers

There were too few officers in the "other" category to conduct a sequence analysis for this group.

Officer Gender

Officer gender was not found to contribute to any fluctuations in the cases involving the use of force, probably because only eight percent of the officers were female.

Officer Assignment

For officers who worked in the uniform unit or K9, certain sequences of third actions influenced the use of force. Following initial verbal actions by officer and suspect and a physical second action by the officer and a verbal second action by the suspect, third actions in which both officer and suspect responded verbally resulted in force 100 percent of the time, a 36 percent increase in force cases since the first encounter between both actors. In the same sequence, the percentage of cases ending in force increased by 11 percent when the officer's third action changed to verbal and the suspect's third action was physical. When the third action of the officer was physical and the suspect remained verbal, there was a 19 percent increase in force incidents. Finally, there was a 30 percent increase in use-of-force cases when both third actions were physical.

   The other sequence of third actions that showed large increases in the number of cases ending in force was following verbal first actions and physical second actions by both officer and suspect. In this situation, third actions in which the officer was verbal and the suspect became physical resulted in force 100 percent of the time. This same percentage was found when the officer's third action was physical and the suspect's third action was verbal. This translated to an overall increase in use-of-force cases by 36 percent from the initial encounter between officer and suspect. Finally, the percentage of cases ending in use of force increased by 37 percent when the third actions of both uniform or K9 officer and suspect were physical.

Age of Officer

Officers Less Than Thirty Years Old

An officer's age appeared to affect the number of incidents ending in force. For incidents where the officer was less than thirty years old, verbal first actions by both the officer and the suspect resulted in force 53 percent of the time. This figure decreased by 14 percent when the second action of the officer was physical and the second action of the suspect was verbal. After verbal first and second actions, there was a 13 percent decrease in the percentage of cases resulting in force when the third action of the officer was physical and the third action of the suspect was verbal. The same decrease was found when both the third actions of officer and suspect were physical.

There was an 18 percent increase in use-of-force cases (to 71 percent from the initial verbal encounter) when the third action of the officer was verbal and the third action of the suspect was physical.

In incidents involving verbal first and second actions by officer and suspect and a physical third action by the officer and a verbal third action by the suspect, there were a few third actions that produced large increases or decreases in the number of use-of-force cases. In this sequence, a third action in which the officer less than thirty years old remained verbal and the suspect became physical resulted in a 44 percent increase in force cases from the original verbal encounter between both actors. The last sequence of third actions that had large changes in force for officers less than thirty years old was immediately following verbal first actions and physical second actions by both officer and suspect. Under this sequence of actions, a verbal third action by the officer and a physical third action by the suspect resulted in force 80 percent of the time, a 33 percent increase in force incidents since the initial verbal encounter. The results were the same for when the officer's third action was physical and the suspect's third action was verbal.

Officers More Than Thirty Years Old

In use-of-force cases involving officers more than thirty years old, the results found were in direct contrast with the results found with younger officers (less than thirty years old). After an initial verbal interaction, if the officer's second action was physical and the suspect's second action was verbal, the percentage of cases ending in force *increased* by 14 percent. In the same sequence of actions for officers less than thirty years old, there was a 14 percent *decrease*. After two verbal actions and a physical third action by the officer and a verbal third action by the suspect, 60 percent of the cases ended in force, a 13 percent increase in use-of-force cases from the original encounter between the two actors. When both third actions of the officer and suspect were physical, 60 percent of these cases ended in force. Finally, when the third action of the older officer was verbal and the third action of the suspect was physical, only 30 percent of the cases ended in force. This was a 17 percent decrease in the amount of force cases since the initial verbal actions by officer and suspect.

Looking at the sequence consisting of initial verbal actions by both officers more than thirty years old and suspects followed by a physical second action by the officer and a verbal second action by the suspect, third actions in which the officer was verbal and the suspect became physical led to 9 percent of the actions of ending with the use of force, which was a 42 percent decrease. In the sequence of verbal first actions followed by physical second actions by both officer and suspect, 20 percent of the cases resulted in force

being used when the third action of the officer was verbal and that of the suspect was physical. This was the same percentage for physical third actions by the officer and verbal third actions by the suspect. This translated into a 31 percent increase in use-of-force cases from the original verbal encounter between both actors.

Officer Experience

When the officer had less than five years experience on the force and the initial actions of both officers and suspects were verbal, force resulted in 44 percent of the cases. No second action by either suspect or officer produced any large increases or decreases in the number of force incidents. There were some notable fluctuations in the number of force incidents for various sequences of third actions. After two verbal interactions, if an officer's third action was physical and the suspect's third action was verbal, the percentage of cases ending in force decreased from 44 percent to 13 percent.

After verbal first actions followed by physical second actions by both the officer and suspect, third actions in which an officer with less than five years experience remained verbal and the suspect became physical resulted in a 23 percent increase in use-of-force cases. Incidents in which third actions of the officer were physical and the suspect remained verbal ended in force 64 percent of the time. This translated into a 20 percent increase in use-of-force incidents. Finally, physical third actions by both officer and suspect in this sequence resulted in a 14 percent increase in the number of force cases.

When an officer had between five and ten years of experience, the percentage of incidents involving force was 26 percent. The only result of note involved a physical second action by the officer and a verbal second action by the suspect. In this sequence of events, only 4 percent of the cases ended in the use of force, a 22 percent decrease. There were no sequences of third actions that contained any significant changes in the percentages of force incidents.

Finally, when the officer had more than ten years of experience, 30 percent of cases ended with force being used. When the officer's second and third actions both were physical and the suspect's second and third actions both were verbal following verbal first actions by both, force occurred in 52 percent and 53 percent of the cases respectively. This was a 22 percent and a 23 percent increase, respectively, in force incidents from the first officer–suspect encounter. The only other sequence of third actions influencing the use of force by officers with more than ten years of experience was after verbal first actions by both officer and suspect and a physical second action by the officer and a verbal second action by the suspect. Under this scenario, the percentage of cases ending in force decreased by 26 percent from the initial verbal encounters between the officer and suspect.

Series 2: First Officer Action Is Verbal, First Suspect Action Is Physical

Although some variables appear to positively or negatively influence the percentage of cases involving the use of force, cell sparseness is a major concern and poses some issues with regard to the validity of any inferred conclusions. The data are reported only as a guide to the experiences in the Miami-Dade department.

Calls for Service

Administrative Calls

The first variable statistically analyzed using cross-tabulations was again the original call or signal (calls for service). Ten percent of all administrative calls began with the officer responding verbally and the suspect responding physically. When both officer and suspect second actions were verbal, the percentage of cases ending in force decreased slightly to 5 percent. An adequate analysis of a physical second action by the officer and a verbal second action by the suspect was unavailable due to missing data. When the second action of the suspect was physical and the second action of the officer was verbal, force was used in only 7 percent of the cases. When both the officer's and suspect's second actions were physical, force was used in 14 percent of the cases. A full analysis of third actions by officers and suspects was incomplete due to missing values. The only data available were for a physical third action by the officer and a verbal third action by the suspect; 20 percent of these cases ended with force, a 10 percent increase.

Traffic Offense Calls

Eighteen percent of all traffic violations began with an officer responding verbally and the suspect responding physically. The various second actions of both officer and suspect remained consistent with this figure, deviating by plus or minus 5 percentage points. There were missing values for some third actions. In the sequence of verbal second actions followed by verbal third actions by both the officer and the suspect, the percentage of cases ending in force increased from the original figure to 40 percent. When the third actions of the officer and the suspect were verbal, the percentage of cases resulting in force being used was 20 percent, only a 2 percent increase. When there was a physical second action by the officer and a verbal second action by the suspect and both acted verbally in their third actions, force was used 25 percent of the time, a 7 percent increase from the percentage of force cases found in the initial encounter between officer and suspect. There was a 35 percent increase in force cases from the initial figure when

the third action of the officer was verbal and the suspect became physical. This was the same percentage of increase found when analyzing an officer's physical third action and a suspect's verbal third action.

Property Offense Calls

When the police responded to a property offense, 22 percent of all cases resulted in force when the first action of the officer was verbal and the first action of the suspect was physical. The various second actions by officer and suspect did not deviate much (they increased by at most 7 percent) from the percentage of force found during the original encounter. There were many missing values for third actions; however, there was one sequence of actions that changed the frequency of force. When the third action (regardless of the second action) of the officer was physical and the third action of the suspect was verbal, the percentage of cases involving force increased to 40 percent, a 20 percent increase from a verbal first action by the officer and a physical first action by the suspect. However, when the third action of both officer and suspect was physical, only 20 percent of all cases ended in force, which amounted to a 2 percent decrease from the initial actions of both.

Violent-Crime Calls

Violent crime was the only original call or signal that had no missing values for any sequences of action by officer or suspect. Thirty-eight percent of violent crime calls began with the suspect responding physically and the officer responding verbally. All the various second actions by both officer and suspect corresponded exactly with the percentage of the first interaction (38 percent); however, there were some increases when the third actions were analyzed. When the third action of both officer and suspect was verbal following verbal second actions by both parties, force occurred in 67 percent of the cases, a 29 percent increase. When the officer's third action was physical and the suspect's third action was verbal in this sequence, the number of cases ending in force was 60 percent, a 22 percent increase. When both officer and suspect displayed physical third actions, there was only a 2 percent increase.

After a physical second action by the officer and a verbal second action by the suspect, the percentage of cases ending in force increased by 18 percent for verbal third actions by the officer and physical third actions by the suspect. The result was identical for situations when an officer's third action was physical and a suspect's third action was verbal. After physical second actions by both officer and suspect, third actions in which the officer responded verbally and the suspect responded physically resulted in the use

of force in 50 percent of the cases. This same result occurred for verbal third actions by the suspect and physical third actions by the officer.

Drug/Alcohol-Related Calls

When the original call or signal was for a drug/alcohol offense, the sequence in which the first action of the officer was verbal and the first action of the suspect was physical ended in the use of force 4 percent of the time. Half of the data were missing for the second sequence of actions; the results of the data available matched the first sequence of actions. Following an officer's verbal first and second actions and a suspect's physical first action and verbal second action, 33 percent of the cases ended in force when the third actions of both officer and suspect were verbal, a 29 percent increase from the first encounter between officer and suspect. The only other useful data came when the third actions of both officer and suspect were physical, which resulted in a 16 percent increase in cases ending in force.

Age of Suspect

A suspect's age affected the frequency of police use of force for second and third sequential actions by officer and suspect. For suspects less than the age of thirty years, 62 percent of cases began with a verbal first action by the officer and a physical first action by the suspect. When the second actions of both the officer and suspect were verbal, the percentage of cases involving the use of force increased by 10 percentage points to 72 percent. When the second action of the officer was physical and the second action of the suspect was verbal, the number of cases ending in force decreased by 19 percentage points to 43 percent. The final two second actions by the officer and the suspect fluctuated only fractionally from the original figure of 62 percent.

Suspect Ethnicity

Forty-four percent of all force cases involving Anglo suspects began with a verbal first action by an officer and a physical first action by the suspect. When the second action of the officer was physical and the second action of the suspect was verbal, force resulted in 71 percent of the cases, an increase of 27 percent. When the third actions of both officer and suspect were verbal following verbal second actions by both, the percentage of cases involving force increased by 23 percent. Anglo suspects experienced a 16 percent increase in the use of force when the officer's third action was physical and the suspect's third action was verbal. Anglo suspects also experienced a 16 percent increase in the number of cases ending in force when the

third actions of both officer and suspect were physical after verbal second actions by both. When the second actions of the officer and suspect were both physical, force resulted in 100 percent of the cases when third actions by both parties were verbal. The percentage found in this scenario was the same for third actions in which the officer responded physically and the suspect responded verbally. After a physical second action by the officer and a verbal second action by the suspect, the percentage of cases ending in force decreased by 29 percent from the initial encounter between both actors.

Fifty-six percent of all cases involving African-American suspects began with a physical first action by the suspect and a verbal first action by the officer. When the second action of the officer was verbal and the second action of the suspect was physical, force was used in 29 percent of the cases, a 27 percent decrease from the first action. When the officer's and suspect's third actions were verbal following verbal second actions by both, the percentage of cases ending in force decreased by 23 percent. African-American suspects also experienced a 16 percent decrease in cases ending in force when the officer's third action was physical and the suspect's third action was verbal. All (100 percent) African-American suspects experienced use of force when the officer's third action was physical and the suspect's third action was verbal after verbal second actions by both. For verbal third actions by both officer and suspect following a physical second action by the officer and a verbal second action by the suspect, force resulted in 75 percent of the cases, a 29 percent increase.

When the suspect was Hispanic, 29 percent of the cases resulted in force when the first action of the officer was verbal and the first action of the suspect was physical. When the second actions of both the officer and suspect were verbal, Hispanics experienced a 20 percent decline in the number of incidents where force was used. For cases in which an officer's second action was physical and suspect's second action was verbal, use-of-force cases involving Hispanics increased to 67 percent. No other sequence of actions had any significant effects when the suspects were Hispanics.

In the ethnic category "other," 60 percent of the cases ended in the use of force when there was a verbal first action by an officer and a physical first action by the suspect. When the second action of both officer and suspect was verbal, the percentage of cases resulting in the use of force increased to 82 percent. When the second action of the officer was physical and the second action of the suspect was verbal, the number of cases ending in force decreased to 33 percent. When the third actions of both officer and suspect were verbal following verbal second actions by both, 100 percent of the cases resulted in force. There was a 15 percent increase in force from the initial actions when the third actions were both physical.

After a physical second action by the officer and a verbal second action by the suspect, force resulted in 25 percent of the cases. When the second actions of the officer and suspect were physical, 100 percent of all incidents ended in the use of force for third actions in which the officer responded verbally and the suspect responded physically. The finding was the same for third actions in which the officer became physical and the suspect remained verbal.

Gender of Suspect

A suspect's gender did not appear to play an influential role in the number of cases ending in force.

Suspect Impairment

Whether a suspect was impaired affected the percentage of use-of-force cases for half of the dyads in Series 2. In these circumstances, after a second action in which the officer was physical and the suspect was verbal (reversing the initial action) and a third action in which the officer was verbal and the suspect was physical, force occurred in 100 percent of the cases. When a suspect was impaired, 50 percent of the cases ended in force after physical second actions by both actors. When the third action of the officer was verbal and the suspect became physical, the same percentage resulted when the third action of the officer was physical and the suspect remained verbal.

Forty-three percent of all use-of-force incidents did *not* involve an impaired suspect. When the third actions of an unimpaired suspect and an officer were verbal following a physical second action by the officer and a verbal second action by the suspect, the percentage of cases ending in the use of force increased to 75 percent. There was a 20 percent increase in use-of-force cases when the third action of the officer was physical and the third action of the suspect was verbal. A 50 percent increase in force was found when the third actions of both officer and suspect were physical following a physical second action by the officer and a verbal second action by the suspect.

Suspect Resistance

Nonviolent Resistance

Only third actions in the sequence showed variation. When a suspect resisted nonviolently and the officer's first action was verbal and the suspect's first action was physical, force was used in 51 percent of the cases. Officer and suspect second actions did not deviate by more than 7 percentage points.

However, when the third actions of both officer and suspect were verbal following verbal second actions by both, the percentage of cases ending in force decreased by 18 percent. There was a negligible increase in force from initial officer–suspect actions when the officer's third action was physical and the suspect's third action was verbal. The number of cases resulting in the use of force declined by 31 percent when the officer's third action was verbal and the suspect's third action was physical. When both the officer and suspect third actions were physical, there were no significant results.

Violent Resistance

For incidents with a verbal first action by an officer and a physical first action by the suspect in cases where the suspect resisted violently, 50 percent of cases ended in the use of force. There were no large or unusual fluctuations through the various sequential second actions. Instances in which the third actions of both the officer and suspect were verbal following verbal second actions by both saw an increase in force to 67 percent relative to the initial police–citizen encounter. The use of force decreased to 40 percent when the officer's third action was physical and the suspect's third action was verbal. The largest increase in the percentage of cases resulting in force was when the third action of the officer was verbal and the third action of the suspect was physical. Such cases increased to 80 percent. When the third actions of both the officer and the suspect were physical following verbal second actions by both, the percentage of cases ending in force decreased by 10 percent from the initial encounter.

When the third actions of the officer and suspect were verbal following a physical second action by the officer and a verbal second action by the suspect, the percentage of cases resulting in force declined by 13 percent from the original officer–suspect encounter. Third actions in which the officer was verbal and the suspect became physical resulted in all the cases ending in force. A decrease of 25 percent was found for third actions in which the officer responded physically and the suspect responded verbally. The only other sequence of third actions affecting the number of incidents that involved the use of force was following physical second actions by both officer and suspect. In this scenario, when the third action of the officer was physical and the third action of the suspect was verbal, force occurred in 100 percent of the cases, which amounts to a 37 percent increase in the number of use-of-force cases (involving suspects resisting violently) from the initial police–citizen encounter.

Officer Ethnicity

Incidents in which the officer was Anglo and the first action by the officer was verbal and the first action of the suspect was physical resulted in force

58 percent of the time. The only change in percentages occurred when the third actions of both the officer and the suspect were verbal after verbal second actions by both. In this instance, the percentage of cases ending in force decreased by 25 percent.

Following a physical second action by the officer coupled with a verbal second action by the suspect, third actions in which the officer reacted verbally and the suspect reacted physically led to all cases ending in force. This was a 42 percent increase in the number of incidents ending in the use of force in relation to the initial police–citizen encounter. There was a 20 percent decrease in the number of use-of-force incidents when the third action of the officer was physical and the third action of the suspect was verbal.

In the last dyad (dyad 6) involving Anglo officers, when the third actions of the officer and suspect were verbal after physical second actions by both, force was used in 100 percent of the cases. This was the same finding when the third action of the officer was verbal and the third action of the suspect was physical. The increase was 42 percent more than the initial encounter.

Fourteen percent of Series 2 incidents ended in the use of force when an officer was African American. When the third actions of both the officer and the suspect were verbal after a physical first action by the suspect and a verbal first action by the officer and verbal second actions by both, force occurred in 33 percent of the cases. This was a 19 percent increase. The percentage of force incidents in Series 2 involving Hispanic officers was 28 percent. When the officer's third action was physical and the suspect's third action was verbal after verbal second actions by both, force resulted in 50 percent of the cases. This translates to an overall increase of 22 percent relative to the initial encounter.

If a Hispanic officer was involved in a Series 2 incident, force was used in 35 percent of the cases. When the second action of the officer was physical and the second action of the suspect was verbal, the percentage of cases that ended in force being used was 100 percent. The same result occurred when the officer's third action was physical and the third suspect action was verbal following verbal second actions by both. Because of missing data, meaningful results could not be deduced for the remaining dyads (dyad 5 and dyad 6) representing other sequential third actions of both officer and suspect.

Officer Gender

Ninety percent of the cases involving male officers ended in the use of force when their first action was verbal and the suspect's first action was physical. The percentages of force barely changed throughout the sequential second actions. When the third actions of a male officer and a suspect were verbal following verbal second actions by both officer and suspect, 67 percent of the cases ended with force being used. This was a 23 percent decrease in

force incidents from the first actions of both officer and suspect. All the cases (100 percent) ended in force when the third action of the officer was physical and the third action of the suspect was verbal and when both the third actions of officer and suspect were physical. These results should be interpreted with caution because male officers comprised 90 percent of the sample of officers.

Use-of-force cases involving female officers in which the first action by the officer was verbal and the first action by the suspect was physical resulted in force being used 10 percent of the time. When the officer and suspect third actions were verbal following verbal second actions by both the officer and the suspect, the percentage of cases ending in force was 33 percent, a 23 percent increase. The remaining two dyads in Series 2 did not provide any meaningful results due to cell sparseness and overrepresentation of male officers.

Age of Officer

Forty-eight percent of all cases involving officers less than the age of thirty years ended in the use of force when the first action of the officer was verbal and the first action of the suspect was physical. Second actions produced no significant changes in the number of cases ending in the use of force. The various sequential third actions by the officer and suspect did produce fluctuations. When the third actions of an officer less than thirty years old and a suspect were verbal, 33 percent of all the cases ended in force after verbal second actions by both parties, a 15 percent decrease in use-of-force incidents from the first actions of both officer and suspect. There was a 12 percent increase in the number of cases resulting in force being used when the officer's third action was physical and the suspect's third action was verbal, and when the third action of the officer was verbal and the suspect's third action was physical. Finally, there was only an 8 percent decrease in the percentage of cases ending in force when the third actions of both officer and suspect were physical.

Another third-action dyad sequence that contained noteworthy data involved an officer less than thirty years old when both third actions were verbal following a physical second action by the officer and a verbal second action by the suspect. In this scenario, 75 percent of all cases ended in force being used, which was a 27 percent increase from the initial police–citizen interaction. Following a physical second action by the officer and a verbal second action by the suspect, there was a 16 percent increase in use-of-force cases for third actions in which the officer responded physically and the suspect responded verbally. With physical third actions by both the officer and suspect following a physical second action by the officer and verbal second action by the suspect, there was an 11 percent decrease in use-of-force incidents. When the sequence included physical second actions by both people

and a verbal third action by the officer and a physical third action by the suspect, all interactions ended with force (100 percent).

The results for officers more than the age of thirty years were in direct contrast to those of younger officers (less than thirty years old). Every action that caused a decrease in the percentage of cases ending in force for younger officers caused an increase in the percentage of cases ending in force for older officers. An older officer's physical third action and a suspect's verbal third action following verbal second actions by both officer and suspect led to a 12 percent decrease in use-of-force incidents from the initial police–citizen encounter. In comparison, younger officers experienced a 12 percent *increase* in this sequence of actions. When the third actions of an older officer and a suspect were verbal following verbal second actions by both, 67 percent of cases ended in the use of force. This was a 15 percent decrease in force from the first interaction. There was a 12 percent decline in the amount of police use of force with a verbal third action by the officer and a physical third action by the suspect. Finally, when an officer more than thirty years old and a suspect used a physical third action in this scenario, force occurred in 60 percent of the cases. This represented a slight increase of 8 percent from the initial officer–suspect interaction.

Beginning with dyad 5, all but one sequence of actions produced fluctuations in the percentages of police use of force. When there were verbal third actions by both an officer more than thirty years old and a suspect following a physical second action by the officer and a verbal second action by the suspect, the percentage of use-of-force cases decreased by 26 percent since the initial police–citizen encounter. Third actions in which the officer was physical and the suspect was verbal resulted in a 13 percent increase in cases involving force compared to the first stage of the interaction. When the third actions of both the officer and suspect were physical, force was used in 64 percent of the cases, a 13 percent increase over first encounter. In the sequence involving physical second actions by both officer and suspect and verbal third actions, all the cases (100 percent) ended in force. This was an overall increase of 49 percent from the initial officer–suspect encounter.

Officer Experience

There were some increases in the percentage of force cases when an officer's experience on the force was analyzed. Officers with less than five years experience in cases involving a physical initial action by the suspect and a verbal initial action by the officer used force in 43 percent of incidents. This figure increased to 100 percent when the both the officer's and suspect's third actions were verbal. Another change in use-of-force percentages occurred when the second action of the officer was physical and the second action of the suspect was verbal. In this instance, the use of force increased by 17 percent to 60 percent with regard to the initial officer–suspect encounter.

Dyad 5 showed fluctuations in the use of force. When the third action of an officer with less than five years experience was verbal and the third action of the suspect was physical following a physical second action by the officer and a verbal second action by the suspect, 50 percent of the cases resulted in force being used. This was a 13 percent increase. Physical third actions by the officer and verbal third actions by the suspects led to a 26 percent increase in the number of cases ending in force. Finally, 64 percent of the cases resulted in the use of force when the third actions of both the officer and the suspect were physical, a 27 percent increase in cases since the initial encounter.

There were no notable fluctuations for any of the first and second dyads involving officers with between five and ten years experience, and only one sequence of actions involving third dyads. When the third actions of both officer and suspect were physical following a physical second action by the officer and a verbal second action by the suspect, 7 percent of all incidents ended in force being used. This was an overall decrease of 20 percent from the initial encounter.

Police–citizen contacts in which the officers had more than ten years experience comprised 37 percent of all contacts ending with force when the first officer action was verbal and the first suspect action was physical. The percentage of use-of-force incidents increased by 20 percent when the officer's second action was physical and the suspect's second action was verbal. A 12 percent decline in use-of-force incidents was found when the second action of the officer was verbal and the second action of the suspect was physical. The other various sequential second actions did not produce any noteworthy changes.

The only other sequence to note was contained in dyad 5. When the third action of the officer was verbal and the third action of the suspect was physical after a physical second action by the officer and a verbal second action by the suspect, there was a 15 percent increase in the number of use-of-force cases. Third actions in which the officer became physical and the suspect remained verbal led to a 22 percent decrease in the percentage of incidents ending in force being used. Finally, all cases (100 percent) in which there were physical second actions by both parties and verbal third actions resulted in the use of force.

Series 3: First Officer Action Is Physical, Suspect First Action Is Verbal

Series 3 dealt with initial actions by the officer as physical and the suspect as verbal. Due to missing data and cell sparseness, we do not have enough data to statistically analyze the amount of force applied during the various second and third actions by officers and suspects.

Series 4: Officer First Action Is Physical, Suspect First Action Is Physical

Series 4 also suffered from problems with missing or inadequate data. This dyad dealt with physical first actions by the officer and the suspect.

Calls for Service

Domestic Disturbance Calls

Domestic disturbances were the only call or signal that had adequate data to be analyzed as well as fluctuations in the percentages of force used. Following initial physical actions by both officer and suspect, force was applied in 6 percent of all domestic disturbance calls for service. There was missing data for verbal second actions by the officer and suspect so no valid results were obtained. There was a 94 percent increase in cases ending in force when the second action of the officer was physical and the second action of the suspect was verbal. In addition, 100 percents of incidents ended in force when the second action of the officer was verbal and the second action of the suspect was physical. Finally, there was a fractional 1 percent increase in use-of-force incidents when the second actions of both officer and suspect were physical.

Suspect Impairment

Police–citizen contacts in which the suspect was impaired did not appear to be correlated with the use of force. Only when a suspect was not impaired did any changes in police use of force take place. An unimpaired suspect was involved in use-of-force incidents 66 percent of the time when initial actions by the suspect and officer were physical. When the second action of both officer and suspect was verbal, force was used in 50 percent of the cases. This was a 16 percent decrease in the percentage of encounters ending in force from the figure found between first actions by officer and suspect. When an officer's second action was physical and the suspect's second action was verbal, the amount of cases ending in force increased to 100 percent. This was also the percentage when the officer's second action was verbal and the suspect's second action was physical. Finally, when the second actions of both officer and suspect were physical, there was no change in the percentage of cases resulting in the use of force.

Officer Gender

An officer's gender influenced the percentage of use-of-force incidents only if the officer was male. Male officers were involved in citizen encounters

ending in force 96 percent of the time when their first action was physical and the citizen's first action was physical. This figure is extremely high and should be interpreted with caution due to the high proportion of males in the sample. With verbal second action by the officer and a verbal second action by the suspect, 100 percent of the police–citizen encounters ended in force. This finding was the same when the officer's second actions were physical and verbal and when the suspect's second actions were verbal and physical, respectively. Similarly, when the officer's third action was verbal and the suspect's third action was verbal following physical first and second actions by both, force resulted in all cases (100 percent). The same result was produced when the officer's third action was physical and the suspect's third action was verbal after physical first and second actions by both actors. In the sequence in which all three pairs of interactions were physical, force occurred in 92 percent of the cases.

Summary

These sequential data on police use of force and suspect resistance are the first reported information on how suspects respond to police use of force and how police subsequently respond to suspect resistance. Although it is difficult to follow, the data begin to shed light on this complex interactive process between police officers and suspects during encounters when the control of the officer has broken down.

Clearly, the actors' behavior in the encounter does not remain static but is interdependent and prompts a reaction. In many of the cases, several iterations occur. While research techniques allow us to capture the data, there is no easy way to explain them. Another concern is the small number of cases in each cell, making a breakdown by independent variables problematic. The data are presented as a first look into the interactive process and should be taken as preliminary.

The preliminary conclusion we take from these data is that all encounters end either with the suspect being subdued by an officer's equal or greater level of force or by the suspect's cooperation. The longer an interaction continues, the more likely there is to be use of force, even with only nonviolent resistance from the suspect. Preemptive force seemed to be effective and produced an overall decrease in the number of incidents involving the use of force. Once a cycle of force is initiated, however, there appears to be only a limited opportunity to deescalate the level of force. One of the major shortcomings of the data is the lack of time intervals from action to action. For example, continued verbal interaction may last thirty seconds or three minutes, and it would be important to know whether the length of an encounter without force increases the chance of no force being used at all. Initial contacts overwhelmingly involve verbal directives and orders,

although there were fourteen cases where the officer's first action was offensive force. By the third officer interaction, 48 percent of officers had resorted to defensive force. This seems to indicate that suspects' use physical resistance early in an interaction but are overcome by offensive force in subsequent actions by the officer.

Impact of Independent Variables

Looking at the types of calls to which officers were responding also showed some interesting results. The continuing use of force in domestic calls seems to indicate that verbal actions to establish reason do not have sufficient effect to deescalate a problematic situation. These domestic disturbances seem to have their own peculiar sequence of actions beyond the third sequence as indicated by the continued verbal interactions.

The sequential order of force and resistance between suspects less than thirty years old and more than thirty years old was striking. It is possible that the police have less patience with older suspects, that physical actions by officers have a greater effect on younger suspects, or that earlier actions using higher levels of force are used and are successful more frequently with younger suspects. It also appears that older officers resort to the use of force sooner than their younger counterparts. The ethnicity of the officer seems to have an impact on the levels of force used against suspects. Anglo officers have a tendency to be physical on their third interaction, which might indicate a limit to their patience. Hispanic officers appear to be more patient and continue to respond verbally, even in the third sequence of actions.

Future research on police use of force should consider the interactive nature of the encounter and the host of situations and characteristics we have introduced. Certainly, the time between actions would be an important although difficult variable to capture. It is important to understand how suspects and officers respond to each other, in what sequence, and with what result. It remains a challenge to explain the data without confusing the reader.

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Miami-Dade Police Department

Inconsistencies between Officer and Suspect
Accounts of the Use of Force

IN ADDITION to the interactive and sequential analyses of the use of force
in MDPD (Chapters 3 and 4, respectively), we also undertook an analysis
of officer and citizen versions of situations in which force was used. This
innovation serves several purposes beyond the limited empirical findings
the research yields, although these findings do, to a large extent, reinforce
those found in Chapters 3 and 4. First, it underscores the importance of
unbiased reporting, given the significant rates of inconsistency between of-
ficer and suspect versions of events. Second, it demonstrates the unavoidably
self-serving nature of reporting by those involved, whether officers, suspects,
or citizens. This is of particular relevance in a social climate where lawsuits
abound. Third, and perhaps most important for the purposes of this book,
this groundbreaking approach indicates that there is a clear need for a
conceptual framework with which to assess (and research) the use of force
including both the officer's and suspect's actions. We propose such a frame-
work in the final chapter.

In addition to interactional and sequential analyses, data were also col-
lected on officer and suspect versions of the same incidents. We compared
the versions on three occasions using three different data points. The first
sample was generated from the agency's official control-of-persons reports,
which were the basis of the data set analyzed in Chapter 4. These data served
as a benchmark, allowing us to ascertain where there were differing versions
of the same event. The second data set was taken from interviews with a
sample of suspects who were part of an ongoing Arrestee Drug Abuse Moni-
toring project (ADAM) in the Dade County jail. These arrestees were asked
if force was used on them during the course of their arrest. They were given
an opportunity to explain their experiences, which were compared to the
official version as recorded on the control-of-persons reports. Additionally,
this sample of arrestees was asked to describe any force they had experienced

from officers and also whether it was reasonable. The third sample consisted of the ADAM interviewees, who were reinterviewed by telephone one year after the original interview.

The Miami-Dade Police Department: Control-of-Persons Forms

During 1997 and 1998, there were 676 control-of-persons reports filed by MDPD shift supervisors. Six hundred and twenty-seven included data on whether there was agreement between suspect and officer concerning the levels of force and resistance during an arrest. Five hundred and fifty-three reports indicated that the officer and suspect versions agreed (88.2 percent) and 74 (11.8 percent) showed disagreements or inconsistencies. In other words, more than 88 percent of the reports indicated no disagreement between officer and suspect, while 12 percent of the reports had discrepancies between the two versions of the incident. When considering the officer and *witness* versions, almost the same numbers of incidents as before showed agreements (87.7 percent) and disagreements (12.3 percent).

The following sections include comparisons of the information contained in the control-of-persons form between the officer and suspect versions of the incidents.

Calls for Service

The data from the control-of-persons forms show that the calls for service with the highest discrepancy between officer and suspect accounts of the use of force are violent crimes (24 percent), property offenses (20 percent), traffic offenses (18 percent), administrative calls (16 percent), and domestic disturbances (11 percent). However, the calls for service that result in the most consistent versions between officers and suspects are also for violent crimes (34 percent), followed by administrative calls (21 percent) and property offenses (15 percent). The calls for violent crimes are the most volatile and have a high potential for suspect resistance and officer use of force

Suspect Resistance

At the lower level of suspect resistance, it is more likely there will be disagreement between officer and suspect accounts. Suspects who actively resist arrest are less likely to dispute the level of force reported by the officer. The reports also indicate that many of the disagreements appear to question the intent of the officer rather than the outcome of his or her actions. For example, in one case, the suspect and officer agreed that the suspect's

head hit the pavement. The suspect claimed that the officer grabbed his hair and slammed his head into the pavement, whereas the officer stated that the suspect's head hit the pavement inadvertently when it was necessary to tackle the suspect to control him. These are the kinds of discrepancies that are unlikely to be resolved satisfactorily because they involve subjective interpretation. The statistical tendency shows that reports from suspects who attempt to flee have more inconsistencies in with regard to the arresting officer's version than reports for any other level of resistance.

Gender Matches

Incidents involving same-gender matches clearly show most discrepancies in reporting the use of force. Interactions in which female officers arrest female suspects result in the greatest percentage of disagreement in reporting force (18 percent). The next highest percentage of disagreement occurs when males arrest males (12 percent).

Age

The younger the officer, the more likely it is there will be a dispute in reporting use and levels of force. Officers in their twenties have the highest percentage of disagreement on the reported level of force (16 percent).

Ethnic Matches

The highest level of discrepancy in reporting the use of force exists when the officer is African American and the suspect is Hispanic (18 percent), followed by African-American officers arresting African-American suspects (17 percent). These rates of discrepancy are closely followed by incidents involving a Hispanic officer and an African-American suspect (14 percent) and incidents involving an Anglo officer and an African-American suspect (14 percent). Comparatively, the rates of discrepancy are low when the suspect is Anglo regardless of the ethnicity of the officer. The percentage of discrepancy for Anglo suspects is 6 percent when the officer is Anglo, 11 percent when the officer is African American, and 3 percent when the officer is Hispanic. When suspects are Hispanic, the discrepancy is 13 percent with Anglo officers, 18 percent with African-American officers, and 7 percent with Hispanic officers. Overall, incidents with African-American suspects have higher rates of discrepant reporting. The data in Table 5-1 show the rate of inconsistencies between the officer and suspect versions of the use of force using the most frequent ethnic matches.

Statistical analyses of the cases provide a useful overview of the inconsistencies between officer and suspect versions of the same event. However,

Table 5-1. *Selected Ethnic Matches, Miami-Dade Police Department, 1997–1998*

Officer Ethnicity	Suspect Ethnicity	N	Rate of Inconsistency (%)
African American	Hispanic	13	18
African American	African American	12	17
Hispanic	African American	10	14
Anglo	African American	10	14

due to the relatively small number of cases, which renders the statistical findings unreliable, it is more important to look beyond the numbers and at specific examples of the use of force. This approach allows us to extend our understanding of the difficulties related to gathering reliable information on the use of force and raises questions about the current framework for reporting, even in progressive police departments like Miami-Dade.

Interviews with Suspects as an Addendum to the Arrestee Drug Abuse Monitoring Study

In 1987, the Drug Use Forecasting (DUF) program began collecting data on arrestees at numerous sites throughout the United States. The program was expanded into the Arrestee Drug Abuse Monitoring program in 1997, which improved and standardized the sampling of sites and arrestees within sites. The ADAM program has two components. The first is a questionnaire administered by a trained interviewer to an arrestee in a booking facility within forty-eight hours of arrest. The second is a urine specimen collected from the respondent, which is used to corroborate claims about recent drug use. Our study utilized an addendum to the ADAM interviews; we asked our questions after the completion of the ADAM interview and the urine collection.

The sample of 604 Miami-Dade County arrestees was from the third (269) and fourth quarters (335) of 1999 data collection. Over a two-week period during each quarter adult male arrestees were approached and asked to participate in the study. Those who agreed to be interviewed were provided with an informed-consent statement (stating that no identifying information would be requested or noted on the interview form). The suspects were also asked to sign a consent form authorizing us to check their agency arrest records.

In response to a screening question, "During your arrest, did the police threaten to use force or actually use force of any kind (i.e., strong verbal orders or threats, grabbing, pushing, hitting, shooting, etc.)?" the majority of those arrested and included in the ADAM project reported that no force was used. Eighty-one suspects (13 percent of the total) indicated that the

police threatened or used force during the arrest and seventy-five of those (92 percent or 12 percent of the total number) indicated that more force than necessary was used (three of the suspects did not sign the consent form to allow us to check their records). Seventy-one of the suspects claiming excessive use of force were arrested by Miami-Dade police officers and four were arrested by the City of Miami police.

The staff at the Miami-Dade Professional Compliance Bureau and City of Miami Internal Affairs Bureau informed the research staff that reports would be submitted within three months of the incident. Three months after the incident date, we checked the files and found only seven control-of-persons reports. That meant either there was no force used in sixty-eight of the incidents or the officers violated policy by using force and not submitting the proper paperwork. This finding raises an important question: Did officers use force on suspects without reporting it, or did suspects erroneously report having force used against them? It seems clear that, whatever the case, inconsistencies between accounts are manifest, and while it is impossible to answer these questions with absolute certainty, it is likely that our interviews provided a forum for prisoners to complain that they would otherwise not have had. Our data indicate either an overwhelming rate of nonreporting of force by officers or erroneous reporting of force by prisoners. Interviews with administrators from both agencies indicated that only rarely (if ever) would an officer not file the proper paperwork; failure to do so has resulted in serious disciplinary actions. Because jail staff would not accept an injured prisoner from a police officer without proper paperwork or would note on the admitting sheet if he or she were complaining of an injury, it is likely that a number of prisoners were making some false claims against the officers, but it remains possible that prisoners without noticeable injuries who did not complain at the booking stage would be admitted to jail without any problems, even if excessive force had been used against them. These conflicting claims (police underreporting or false allegations by suspects) provide no conclusive answer, and cast some doubt on current research findings with regard to the use of force by the police, simply because they are inconsistent. Clearly, to obviate this doubt, more research and a modified approach to research is required to either confirm or refute these findings.

Data from ADAM Interviews

The data collected from this part of the study include information collected from the ADAM interviews as well as the addendum. The addendum contains questions on the reported use of force against a suspect. Officers who completed use-of-force reports averaged 9.8 years of service, were on average 32.4 years of age, were all male, and included four white, one African-American, and two Hispanic officers. The suspects for whom reports were

written averaged 27 years of age; 57 percent were African American, 28 percent were Anglo, and 14 percent were Hispanic. The other suspects (sixty-five) who gave permission to check their files included forty (62 percent) African Americans, fifteen Anglos (23 percent), and ten Hispanics (15 percent); they averaged 31.6 years of age. The officers who arrested suspects but did not complete use-of-force reports averaged 11.3 years of service and 34.3 years of age; 89 percent were male, 11 percent were female; they included thirty-one Anglos (48 percent), fourteen African Americans (22 percent), and twenty Hispanics (31 percent).

Level of Force Used against Suspects

Five suspects (7 percent) indicated only that the police were present or gave verbal direction. Twenty-seven suspects (34 percent) reported that "strong verbal direction, or minimal contact" was used against them. Of the twenty-five suspects (32 percent) who reported being "forcibly subdued, defensively with open hand," control-of-persons forms were completed for three. There were twenty suspects (25 percent) who claimed to be "forcibly subdued offensively." Forms were completed for four (20 percent) of these suspects. Finally, two suspects (3 percent) indicated that an intermediate weapon was used against them. No forms were completed for their incident.

The Alleged Use of More Force Than Necessary

Suspects were asked if the police had used excessive force against them. Sixty-five (84 percent) reported that the police use more force than necessary, and twelve arrestees (15 percent) stated that the police did not. All of those who had reports written on them claimed that the police used excessive force; fifty-eight (83 percent) of those for whom no report was filed claimed excessive force was used on them, and twelve arrestees (16 percent) stated that the police did not use excessive use of force.

Forty-three suspects reported sustaining injuries during their contact with the police (53 percent) and thirty-eight reported no injuries (47 percent). Six (86 percent) of those suspects who had control-of-persons reports written said they were injured, and one (14 percent) said he was not injured. Ten (23 percent) of those who said they were injured but did not have a control-of-persons report said they reported the injury, while thirty-three (77 percent) who claimed they were injured agreed that they did not report it. Thirty-seven (50 percent) suspects stated that they were injured and thirty-seven said they were not injured. Most of the injuries that were reported to the interviewers were minor (thirty-seven, 86 percent), but some were serious (five, 14 percent). All (six) of those who had control-of-persons forms completed said they had minor injuries, but only three (50 percent)

Table 5-2. *Injuries Reported by Use-of-Force Report*

Use-of-Force Report	Injuries Reported		Injuries Not Reported		Total	
	N	%	N	%	N	%
Yes	3	43	4	57	7	100
No	8	11	66	89	74	100
Total	11	14	70	86	81	100

said they reported the injuries, while thirty-one (84 percent) who did not have the forms completed claimed minor injuries. Five suspects had not had forms completed but claimed a serious injury (16 percent). There were eleven suspects (14 percent) who said they had reported their injuries, while seventy (86 percent) did not report the injuries. Three (43 percent) of those on whom reports were written claimed to have told interviewers about an injury and four (57 percent) said they did not. Eight (11 percent) of those on whom there was no report said they reported injuries, while sixty-six (89 percent) said they did not file injury reports. The data in Table 5-2 describe the relationships between reported injuries and the filing of use-of-force reports.

Inconsistent Versions between Suspects and Officers

The versions of the stories provided by the suspects from the ADAM interviews provide an additional component to this research. The fact that we were unable to reject or confirm these accounts because of a lack of control-of-persons reports from the officers involved highlights the fundamental problem of inconsistency encountered by researchers and administrators in this field. The section that follows summarizes the fifteen incidents where suspects made claims to the researchers and no explanation was available from the police officer, and offers both sides for the seven incidents where both versions were available.

There were fifteen instances where suspects made claims that force was used against them, but there was no police report to either confirm or refute their claims. These claims are summarized as follows:

1. Officer grabbed the suspect, twisted his arms, and threw him in the car.
2. Officer threatened to use a gun on the suspect.
3. Officer kicked the suspect with a boot and bit him.
4. Officer pointed a gun at the suspect.
5. Officer hit the suspect with a flashlight.

6. Officer said he had a bad back and if suspect ran he would shoot him in the face.
7. Officer kicked suspect's ribs and put a gun in his face.
8. Officer pulled a gun on him.
9. Officer pointed a gun at him.
10. Officer pointed a gun at him.
11. Officer had a dog bite him.
12. Officer kicked him in the groin, shot at him, and knocked him out cold.
13. Officer slapped him in the face, pushed him into the paddy wagon, and hurt his ankle.
14. Officer pointed a gun and threatened him.
15. Officer told him to shut up before he got shot.

Of these fifteen incidents, more than one-half would have required a use-of-force report if the actions had actually occurred.

Examples of Inconsistencies

A final component of this research is a comparison between the versions recounted by the suspects and the reports filed by the officers. Although there were only seven cases, the comparisons show marked differences that underscore the manifest inconsistencies and consequent problems connected with reporting the use of force.

Case 1
    SUSPECT'S VERSION: I was slammed to the ground, kicked in the groin, and the officer stepped on my back.
    OFFICER'S VERSION: Suspect ran, I tackled him, pulled his arms back to handcuff him, and put knee on his back. Suspect was fighting on ground; one officer held his legs down because he was kicking.

Case 2
    SUSPECT'S VERSION: Officers pushed me, hit me, grabbed my hair, hit me and hit my head on the door of the police car.
    OFFICER'S VERSION: Suspect resisted arrest, was helped into police car by pushing down on his head, but he hit his head on the car door.

Case 3
    SUSPECT'S VERSION: Officers hit me, threatened me, and pulled me up by my hair.
    OFFICER'S VERSION: Suspect was resisting, fighting me, and I wrestled him to the ground, handcuffed him, and stood him up.

Case 4

SUSPECT'S VERSION: The officer threatened to arrest my mother and sister if I didn't say what they wanted me to say.

OFFICER'S VERSION: Officer tackled suspect, arms were taken behind his back to apply handcuffs. Suspect complained handcuffs were too tight.

Case 5

SUSPECT'S VERSION: Officers took me into a room and beat me, punched me, kicked me, and hit me on the head.

OFFICER'S VERSION: Suspect was resisting by hitting officer. Officer tackled suspect and handcuffed him.

Case 6

SUSPECT'S VERSION: Police officer repeatedly yelled, pushed me, and punched me.

OFFICER'S VERSION: Suspect resisted me by fighting. I had to control him by fighting and he fell to the ground when I tackled him.

Case 7

SUSPECT'S VERSION: Officer grabbed my neck, choked, me and used pepper spray.

OFFICER'S VERSION: Suspect resisted, officer sprayed him and cuffed him.

These differences raise important questions about how officers report the use of force and how suspects interpret what happened to them. The accounts may be honest impressions or they may be embellished or fabricated. Some suspect versions appear to be more meritworthy than others, although any judgment is subjective and highly problematic given the relative lack of information.

A Follow-Up on the ADAM Arrestees

Of the 391 arrestees who reported that no force was used against them during their arrest, 78 were included in a recall sample (approximately 20 percent). However, only 29 (37 percent) had an active telephone number. A 50 percent sample was selected for those who claimed force was used against them, but only 16 of the 36 (44 percent) had working telephone numbers. All 7 of the arrestees who had a force report written on them were included in the recall study, but only 3 (43 percent) of them were reachable.

Three phone calls were planned for each suspect. Calls were made on weekday evenings, on weekend afternoons, and on weekday mornings, until contact was made or it was clear the person did not reside at that location. Once contact was made, we stated that any comments were wholly voluntary and that under no circumstances would his or her identity ever be revealed;

Table 5-3. *ADAM Arrestees One Year Later*

Original Response	Called	Contacted	Agreed to Interview	Consistent	No Recollection	Inconsistent
No force	29	16	12	9	2	1
Force/no report	16	7	6	3	1	2
Force/ report	3	2	2	2	0	0
Total	48	25 (52%)	20 (80%)	14 (70%)	3 (15%)	3 (15%)

we read an informed-consent statement that asked for permission to conduct the interview. We called the sample (twenty-nine) that reported no use of force and reached sixteen people; twelve were willing to talk. Nine of the subjects repeated that no force was used against them, one claimed he was beaten, and two claimed to have no recollection of the incident.

Sixteen calls were made to the sample of subjects who had reported force being used for whom no use-of-force report was filed by the police department. Seven subjects were reached and six agreed to talk to the interviewer. Three claimed that force was used against them and two reported that no force was used against them during the arrest. One subject stated that he did not recall the incident. Three calls were made to subjects whom control-of-persons reports were filed. Two subjects were contacted and they both reported force being used against them.

Forty-eight calls were made to suspects, resulting in twenty-five contacts, from which twenty interviews were successfully conducted with arrestees who had been part of the original ADAM interviews (one year earlier). The twenty interviews yielded fourteen responses (70 percent) that were consistent with the answers provided the previous year, while three (15 percent) reported no recollection of the incident and three other changed their original interview statement (15 percent). To summarize, it appears that the majority of the subjects who were willing to be reinterviewed provided accounts that matched the original (Table 5-3). The discrepancies or inconsistencies were in the category where force was used but no report was filed. However, because the numbers are so small, these data can only be used to demonstrate that the arrestees who reported force being used against them where no official report was filed were less consistent one year later than those arrestees who reported no force or those suspects who reported the use of force when an official report was filed. This first attempt to ask arrestees about the force that was used on them after one year shows only that this is a rich area of research that deserves increased attention, given that officer and suspect versions remain significantly inconsistent.

Summary of Conclusions from These Three Sets of Data

Clearly, there are discrepancies between the versions recounted to inter-
viewers by arrestees and those recorded by the police. The data reported
here show some differences within police reports when suspects are allowed
to explain their account of the arrest to the officer's supervisor. Many of
the reports have minor differences or differences that can possibly be ex-
plained by a point of view or "spin" on the situation. Just as officer versions
(including nonreporting) are open to the accusation of being self-serving,
so are suspect versions open to the allegation of being misleading in an
attempt to explain away either the arrest or any injury, or both. In many
cases, suspects will place all the blame for any problem, use of force, or
consequent injury on the officer. Suspects often claim that officers use force
(including excessive force) in the majority of police–citizen encounters.
Officers counterclaim that suspects resist, that force is used only to con-
trol the suspect, and that force only is a *response* to suspect resistance. It
seems clear that parties will report their own version of the facts, proba-
bly with a bias, so as to justify their actions. We are nonetheless beginning
to make some preliminary observations, and to develop some ideas about
gathering accurate information on the use of force (see Chapters 7 and
8). This is an area to which both police managers and researchers need
to devote resources and energy. Police managers should investigate certain
discrepancies in versions of "facts" among officers, suspects, and witnesses.
If supervisors report these differences, then agencies should endeavor to
determine whether they are accurate and whether the officer using force or
reporting the incident requires training or disciplinary action. Researchers
should determine whether these discrepancies occur in other jurisdictions.
Further, closer scrutiny of the reports and interviews from all parties could
yield important information to help us understand the interaction process
between officers and citizens.

Findings from Prince George's County Police Department

THIS CHAPTER focuses on the Prince George's County Police Department (PGPD), and mirrors work done in conjunction with the Miami-Dade Police Department (Chapters 3 through 5). The PGPD section of this book includes descriptions of both officer and suspect characteristics and an analysis of the patterns of interaction of primary officers and suspects (both sober and impaired). Rather than dedicate an entire chapter to sequential analyses (as we do with MDPD in Chapter 5), we incorporate them into this chapter, largely because of the limited data available. As in Chapter 3, an officer's level of force is analyzed relative to the level of suspect resistance using the Force Factor, an index incorporating both officer force and suspect resistance. Due to limited data, we do not focus on the inconsistencies we were able to highlight in the Miami-Dade analysis. However, this chapter does make a significant contribution to the research in this field, and provides further support for both our findings in Chapter 7 and the conceptual framework we propose in Chapter 8.

The data from PGPD were collected during the first six months of 1999 and are based on 244 incidents. The Prince George's County data did not have very many cases with low levels of resistance, which indicates that either force was not frequently used or reports were not filed unless there was significant resistance. It is unclear whether this indicates a reporting bias or a complete population of events. Only five reports were filed with suspects offering no resistance. Further, only one report was filed for a suspect engaging in passive resistance. Most of the reports were filed for suspects actively resisting (57 percent) and defensively resisting (33 percent), although only eight (3 percent) of the suspects engaged in aggravated active resistance. Violent suspects engaged in the most active resistance (76 percent), with domestic disturbance offenders close behind (65 percent). Property and traffic offenders were the least likely to engage in active resistance, although

two traffic offenders and one property offender engaged in aggravated active resistance.

Suspect Characteristics and Actions

The ages of suspects ranged from 13 to 66 years, with a mean age of 29.3 years. Eighty-two percent of the suspects were black, 12 percent were Anglo, 5 percent were Hispanic, and 1.3 percent were Asian. Eighty-nine percent of the suspects were male and 11 percent were female. Seven percent of the suspects were reported to be impaired by alcohol or drugs at the time of the incident. Eighty-five percent were impaired by alcohol, 12 percent by cocaine, and the remainder by other illegal drugs.

Information on the initial behavior of the majority of suspects is either missing or unknown (84 percent). For the remainder, 12 percent were highly agitated and 4 percent were Baker Act or *Ex parte* (mentally challenged) individuals. It appears that officers responded to this question only when a suspect's behavior was extreme, which leads us to believe that in the vast majority of cases the suspect's initial behavior was either calm or only mildly agitated.

Since most of the cases in this study involve the use of some degree of force by the officer, it is not surprising that almost all cases involved suspects who showed some degree of resistance (98 percent). The category of resistance reported most often was actively resisting arrest (57 percent), followed by defensive resistance, including attempts to escape or flee the scene (33 percent). In 5 percent of the cases, suspects used psychological intimidation, and in less than 4 percent of the cases, suspects used aggravated active resistance against the officer.

Forty-one percent of the suspects received some type of injury, and nearly all of these suspects received medical treatment (93 of 100 injured suspects). The most common type of injury to a suspect was irritation from OC spray (28 percent), followed by bruises or abrasions (19 percent). Eighteen percent of the injuries were bites from police dogs, and another 17 percent were lacerations. Injuries from gun shots totaled 1 percent.

The most common use of force involved hands and arms only (61 percent). An additional 15 percent used their fists against the officer, and 16 percent used their feet or legs. Less than 1 percent used a handgun, and 1 percent used a vehicle to assault the officer. In addition, 1 percent used a cutting instrument.

The Effect of Alcohol and/or Drug Impairment on Suspect Behavior

We examined whether the initial behavior of an impaired suspect differs from that of one who is sober, and whether a suspect's intoxication affects that suspect's level of resistance or an officer's level of force. Further, we

investigated any possible relation between suspect intoxication and the chances of injury to the suspect or the officer. We found that suspects who were under the influence of alcohol or drugs had first actions that were more likely to be at the low end of the resistance continuum than unimpaired suspects. Impaired suspects were more likely to be cooperative (32 percent vs. 25 percent), to use verbal or passive resistance (32 percent vs. 17 percent), and to use psychological intimidation (20 percent vs. 14 percent) than unimpaired suspects. However, impaired suspects were much less likely to engage in defensive resistance (5 percent vs. 30 percent). They were equally likely to resist actively (12 percent) as unimpaired suspects, but there were no cases of impaired suspects using either type of aggravated active resistance as their first action.

In relation to the suspect's first action, the analysis concerning impairment and the suspect's highest level of resistance during the police–citizen encounter yielded nonsignificant differences. Apparently, although impairment had some effect on the suspect's first action, it did not affect either the highest level of resistance or the type of weapon or force used by the suspect while resisting.

An examination into the level of force used by the officer on impaired and unimpaired suspects yielded nonsignificant results, as did analyses of suspect and officer injuries and suspect impairment. Apparently, impairment by alcohol or other drugs has little influence on officer or suspect behavior in these interactions.

Officer Characteristics and Actions

The age of the officers who reported using force ranged from twenty-two to fifty years, with a mean age of thirty-three years. Most officers were Anglo (69 percent), 26 percent were black, 4.5 percent were Hispanic, and 0.8 percent were Asian. Eighty-eight percent of the officers were male and 12 percent were female. Thirty-seven percent of the officers were at the police officer rank, 49 percent were corporals, and 10 percent were sergeants. The tenure of officers in the department ranged from less than one year to twenty-seven years, with an average tenure of eight years.

The most common level of force used by officers against suspects was OC spray (30 percent). Offensive force with closed hands or with feet was used to subdue 26 percent of the suspects. In 22 percent of the incidents the officer used an intermediate weapon, and in another 19 percent of the incidents the officer resorted to defensive force needed to forcibly subdue the suspect with open hands or feet. Only 2 percent of the officers used strong verbal orders as the highest level of force, and only 1.7 percent used deadly force.

Sixteen of the officers were injured in the course of these 244 incidents (6.6 percent). Nine (56 percent) of these officers received medical

treatment, and seven (44 percent) received hospital treatment. Most of the injuries were bruises/abrasions (50 percent), lacerations (17 percent), and other miscellaneous injuries (21 percent). It is significant that there were no stabbings or gunshot wounds.

Nearly one-third of the incidents involved only one officer, and in another one-third of the incidents one or two additional officers were involved, whereas in 35 percent of the incidents the exact number of officers was unclear. In 5 percent of the cases, there were three or four officers involved.

Patterns of Interaction between Suspects and Officers

The first analysis examines the level of suspect resistance and officer force in sequential order. The data show that the suspect's first action was usually at the low end of the resistance continuum: cooperative (26 percent), verbal noncompliance (19 percent), psychological intimidation (15 percent), or defensive resistance (26 percent). In only 12 percent of the cases did the suspect actively resist during this first encounter. Further, only 1 percent engaged in aggravated active resistance. During the suspect's second action in response to the officer's first action, there was more resistance. Ninety percent resisted by the second action. Thirty-nine percent of the suspects resisted defensively, and active resistance jumped to 18 percent. Still, only slightly more than 1 percent of the incidents involved aggravated active resistance. Suspect resistance continued to increase into the third suspect action, with active resistance increasing to 32 percent of the cases. Aggravated active resistance remained at around 1 percent. During the fourth suspect action, the level of active resistance continued to climb, amounting to 45 percent of the cases, although there was no aggravated resistance recorded at this stage. By the fifth suspect action, active resistance leveled out (to 43 percent). However, by the sixth suspect action, active resistance was at 50 percent and remained high up to and including the eighth action. There is a greater probability of aggravated active resistance in the final three stages (2–3 percent).

Changing the focus to officer actions, we find that most officers began encounters with suspects by verbal directives (48 percent) or strong verbal orders (43 percent). Five percent used OC spray, and less than 3 percent began their first action with forcibly subduing the suspect, either defensively (2 percent) or offensively (<1 percent). Less than 1 percent used an intermediate weapon as their first action, and none used deadly force. During the second action, officers shifted to using strong verbal orders (53 percent), using OC spray (10 percent), or forcibly subduing the suspect defensively (10 percent), presumably because the suspect did not respond to the first action. Subduing the suspect offensively jumped to 5 percent, use of an

intermediate weapon increased to 4 percent, and there was one incident of deadly force. By the third officer action, 23 percent of officers shifted to using OC spray and 18 percent to forcibly subduing the suspect defensively. Subduing the suspect offensively increased to 7 percent. Use of an intermediate weapon jumped to 11 percent of the incidents, and use of deadly force remained at one (less than 1 percent). The fourth officer action was very similar to the third, with the exception of offensive force, which increased dramatically from 7 percent to 16 percent. By the fifth and sixth actions, officers increased their use of OC spray, which went up to 39 percent. Other types of force increased as well, notably the use of intermediate weapons (21 percent). This pattern is continued for the cases that make it to sixth, seventh, and eighth actions, although very few cases make it beyond the seventh action (only twelve).

Interaction Patterns between Officers and Suspects

In our examination of interaction patterns we looked at the initial interaction of suspects and officers and also examined their sequential interaction to see how actions and reactions affected the levels of force used. As we have already seen, a suspect's first actions are unpredictable. Only 26 percent of the suspects responded with cooperative behavior, while just as many responded with defensive resistance (26 percent). The next-largest category is passive resistance (18 percent). Of particular interest are the first actions of officers and suspects. The data indicate that the level of force used by the officer is highly related to suspect resistance. Further, it appears that there are very few obvious mismatches between the level of force chosen and the resistance offered. For example, all suspects showing no resistance received either verbal directions or strong verbal orders, but no force. The same is true for suspects showing passive resistance or psychological intimidation. The majority of these suspects experienced only strong verbal orders as a response to their noncooperation. Further, just 2 percent were subjected to the use of force (being forcibly subdued in a defensive manner). It was not until suspects began resisting defensively, or actively, that higher levels of force were used.

Injuries to Officers and Suspects

Another important concern is the likelihood of injury to either the suspect or the officer in relation to these early-stage police–citizen interactions. The question centers on the relationship between the suspect's first actions and the chances of officer injury. Does the officer's use of higher levels of force result in more or less injury to either party?

The relationship between the suspect's first action and the chances of the officer receiving an injury is not statistically significant (significance = .99). It appears that the suspect's level of cooperation can change drastically through the interaction process, rendering the suspect's first action irrelevant with respect to the possibility of injury. As a result, the suspect's first action is a poor predictor of the danger inherent in the encounter for the officer. However, the suspect's first action *is* significantly related to suspect injuries. It is interesting that defensive resistance results in greatest chance of suspect injury (68 percent), with the notable exception of the few suspects involved in aggravated active resistance, all of whom received injuries ($n = 3$). Suspects who began the interaction using psychological intimidation were the least likely to receive injuries (23 percent). Interestingly, suspects who began the interaction process by being cooperative often ended up resisting, which resulted in 38 percent of such suspects being injured. There was a fairly strong relationship between the highest level of force used by an officer and the chances of an officer being injured. Increasing levels of officer force correspond to higher probabilities of officer injury, with the exception of incidents where the highest level of officer force was using an intermediate weapon. When no force was used, none of the officers was injured. Likewise, no officer injury occurred when officers used OC spray. Only two (4 percent) officers were injured when the highest level of force was defensive. However, in situations when offensive force was used, 15 percent of the officers were injured. The level of injury decreased to 6 percent in situations where the officers used intermediate force; however, the injuries jumped to 50 percent when officers used deadly force.

As expected, there was a significant relationship between the highest level of force the officer used and injury to the suspect. Generally, the higher the level of officer force, the greater was the likelihood of suspect injury. However, there were several exceptions: The use of OC spray resulted in fewer injuries to the suspect than the use of strong verbal orders with minimal contact. When the officer used offensive force to subdue the suspect, there were fewer injuries to suspects than when the officer used defensive force.

The suspect's highest level of resistance is related to injuries sustained (at the .07 level). Suspects using active resistance I and II were the most likely to be injured (at 71 percent and 100 percent, respectively); however, the sample consisted of only eight arrestees, which makes extrapolation problematic. Suspects resisting defensively were injured 47 percent of the time, a somewhat higher probability of injury than for other types of resistance at the lower end of the force continuum.

Only sixteen officers were injured during police–citizen encounters. Interestingly, two of these cases resulted from suspects who gave no resistance, and two others from suspects resisting defensively. These injuries may have occurred when officers fell or were hurt accidentally. The largest number

of officer injuries resulted from encounters for which the suspect resisted actively (twelve cases). Surprisingly, there were no officer injuries when a suspect engaged in aggravated active resistance (including categories I and II). This was also the case when the suspect resorted to verbal noncompliance or passive resistance, and psychological intimidation.

Officer Characteristics and Force

Officer characteristics did make some difference as to whether force was used and the level of force used. There appears to be a curvilinear relationship between age and highest level of force used. Younger officers were slightly more likely to choose a level of force in the middle of the force continuum, whereas older officers were slightly more likely to choose levels of force at either the lowest or the highest end of the force continuum (age differences were not considered statistically significant when computed at the .05 level, but became significant at the .09 level). The differences were small and may simply reflect differences in assignments of younger versus older officers. The highest mean age was for deadly force (37.75 years), and the lowest mean age was for offensive force (31.58 years).

The relationship between the officer's gender and the highest level of force does not attain the level of statistical significance (.05), but there are some interesting results. Generally, female officers were more likely to apply less force, whereas male officers were more likely to choose higher levels of force. Female officers were much more likely to rely on strong verbal orders than male officers (7 percent vs. 1 percent) and were more likely to use defensive force than male officers (25 percent vs. 18 percent). Furthermore, female officers were slightly more likely to use OC spray than male officers. Male officers were more than twice as likely to use offensive force (28 percent vs. 11 percent). Significantly, all four cases of deadly force involved male officers.

As with age, there is a significant relationship between the officer's rank and the highest level of force used. Higher-ranking officers (corporals and sergeants) were more likely than lower-ranking officers to rely on levels of force at either the low end of the force continuum (strong verbal orders) or at the high end (intermediate weapons and deadly force). It is unclear whether duty assignments affect the differences in situations encountered by higher- and lower-ranking officers or whether higher-ranking officers were more skilled at using strong verbal orders in some situations, thereby avoiding higher levels of force. With respect to the higher end of the force continuum, it could be that higher-ranking officers were more experienced and comfortable with using intermediate weapons and deadly force than were lower-ranking officers, which would explain the greater probability of their using higher levels of force in relation to the

Table 6-1. *Officer's Ethnicity by Level of Force Used[a]*

	Black		White		Total	
	N	%	N	%	N	%
Strong verbal order	2	3%	3	2%	5	2%
OC spray	26	43%	40	24%	66	30%
Defensive force	4	7%	38	23%	42	19%
Offensive force	20	33%	40	24%	60	26%
Intermediate weapon	7	12%	43	26%	50	22%
Deadly force	1	2%	3	2%	4	2%
Total	60	100%	167	100%	227	100%

[a] Significance = .003.

lower-ranking officers. Further research is needed to address these questions more comprehensively.

There is a significant relationship between an officer's race (black vs. white) and the highest level of force used (see Table 6-1). At the two extremes of the force continuum (strong verbal orders and deadly force), black and white officers were nearly equally represented. However at intermediate levels, differences existed. For example, black officers were nearly twice as likely to use OC spray as white officers (43 percent vs. 24 percent), whereas white officers were more than three times as likely to use defensive force as blacks (7 percent vs. 23 percent) and also were less likely to use offensive force (24 percent vs. 33 percent). Finally, white officers were more than twice as likely to use intermediate weapons (26 percent vs. 12 percent).

There was a significant relationship between the number of years an officer had served and the highest level of force used. Similar to the relationships among age, rank, and the level of force used, there seemed to be a curvilinear relationship between the number of years of service and the highest level of force used. Less experienced officers were more likely to choose a level of force in the middle of the force continuum, and more experienced officers resorted to levels of force found at the extremes of the continuum. These differences may simply reflect the differences in assignments of less experienced versus more experienced officers. The highest mean related to years of service was for deadly force (15.25 years) and the lowest mean was for offensive force (6.37 years).

Officer and Suspect Ethnicity

The data presented in Table 6-2 show the cross-tabulation between the ethnicity of the officer and that of the suspect in situations where force was used. Due to the small numbers of Latino and Asian officers and suspects,

Table 6-2. *The Ethnicity of Officers and Suspects in Force Situations*[a]

| | Suspect's Ethnicity | | | | | |
| | White | | Black | | Total | |
Officer's Ethnicity	N	%	N	%	N	%
White	19	13%	129	87%	148	100%
Black	4	7%	52	93%	56	100%
Total	23	11%	181	89%	204	100%

[a] Significance = .186.

these ethnic categories were excluded from the analysis. The remaining ethnic categories are black and white, allowing four ethnic matches: black officers and black suspects, black officers and white suspects, white officers and black suspects, and white officers and white suspects (see Table 6-2). The overall relationship was not statistically significant, but one match was particularly interesting. Black officers were more likely to use force against black suspects than were white officers. On 93 percent of the occasions when black officers resorted to force, it was used against black suspects. The comparable figure for white officers was 87 percent. White officers used force against white suspects only 13 percent of the time, whereas the comparable figure for black officers was only 7 percent. These differences could possibly be due to a tendency to deploy officers in areas with a preponderance of citizens from the same ethnic background.

Table 6-3 compares officer–offender ethnic matches with the degree of resistance of the offender. Because of the small sample size, resistance is grouped into defensive resistance or less and active resistance or higher.

Table 6-3. *Officer/Suspect Ethnic Matches and Resistance By Suspect*[a]

| | Defensive Resistance and Less | | Active Resistance and Higher | |
Officer/Suspect	N	%	N	%
Black/Black	22	42%	30	58%
Black/white	2	50%	2	50%
White/Black	47	37%	79	63%
White/white	5	26%	14	74%
Total	76	38%	125	62%

[a] Significance = .077.

Table 6-4. *Officer/Suspect Ethnic Matches and Level of Force Used by the Officer[a]*

Officer/Suspect	Mean Level of Force	Number of Incidents	Standard Deviation
Black/Black	4.16	50	1.25
Black/white	4.25	4	1.50
White/Black	4.66	128	1.16
White/white	4.16	19	1.26
Total	4.48	201	1.21

[a] Significance = .047.

It appears that white officers arresting either white or black suspects were the most likely to receive the higher levels of resistance (74 percent and 63 percent, respectively). Black officers arresting either black or white suspects were less likely than white officers to receive active resistance or higher (58 percent and 50 percent, respectively).

Table 6-4 compares levels of force used by the officer in the different officer–suspect ethnic matches. Because of the small sample sizes and the number of categories of the variable force, force is treated as an interval variable in this analysis. The mean level of force is calculated for each of the categories of ethnic matches. There are statistical differences between the means: White officers arresting black suspects used higher levels of force than any of the other groups, which all used comparable levels of force. Black officers arresting white suspects used only slightly higher levels of force than the remaining two categories (black officers arresting black suspects and white officers arresting white suspects). It is interesting that both black and white officers used the lowest levels of force against suspects from their own ethnic group.

Type of Call for Service and Officer–Suspect Interactions

Another important factor in understanding officer–suspect interactions is the type of call for service. There are eighteen different types of call for service coded in the Prince George's County files, and it is likely that each type of call elicits a different picture in the officer's mind, creating different expectations with regard to what the situation might involve. We grouped the calls into seven general categories before analyzing the differences in outcome of each type of call:

1. Administrative (2 percent): Special information, conduct investigation, warrant

2. Traffic calls (10 percent): DUI, traffic accident, traffic stop, lost or stolen tag
3. Property offense calls (15 percent): Stolen vehicle, burglary alarm, burglary, theft
4. Violent-crime calls (26 percent): Robbery, shooting, homicide, assault, sex offense
5. Domestic disturbance calls (11 percent): Domestic disturbance
6. Drug/alcohol offense calls (12 percent): Intoxicated person, narcotics investigation
7. Other (24 percent): Suspicious vehicle, suspicious person, trespassing, loitering

We examined events in which force was used in relation to the type of call that initiated the encounter and compared factors across types. Surprisingly, drug- or alcohol-related calls did not have the highest percentage of impaired suspects. Domestic disturbances and the "other" category had the highest percentage of impaired suspects (23 percent and 26 percent, respectively). The "other" category included trespassing and loitering, which often involve impaired suspects. The next highest percentage (20 percent) of impaired suspects came from administrative calls; however, it should be noted that there were only five incidents coded as administrative, and only one person was impaired by alcohol or drugs.

According to the findings, officers used OC spray most often on administrative and "other" calls (60 percent and 52 percent, respectively) and least often on traffic calls (8 percent). Violent-crime calls resulted in the most situations requiring the suspect to be forcibly subdued with closed hands (39 percent). However, use of intermediate weapons was most likely on property offense calls (54 percent) and traffic calls (38 percent). Compare this with only 8 percent of domestic disturbance calls requiring use of intermediate weapons. Deadly force was used infrequently, three times on traffic calls, and just once on a violent-crime call.

Suspect injury and officer injury were examined for the different types of calls. For injury to suspects, there was a statistically significant relationship between the type of call and injury. The types of calls resulting in the most injury for suspects were property offense and traffic-related calls (65 percent and 63 percent, respectively). Domestic disturbance calls had the lowest level of suspect injury (15 percent). Administrative calls (mostly serving warrants) also resulted in a low level of suspect injury (20 percent). Violent-crime and drug- or alcohol-related calls resulted in an intermediate level of suspect injury (44 percent and 48 percent, respectively).

The relationship between officer injury and type of call was not statistically significant. Apparently, officers manage to protect themselves better during the more dangerous calls. An alternative explanation is that risk of injury to officers is random and is not related to the type of call.

Prince George's County Police Department Force Factor

The principles underlying the Force Factor are discussed in Chapter 3. The Force Factor was applied to Prince George's County data using classification criteria similar to those used on the Miami-Dade data. The major difference between the agencies is that the PGPD authorized OC spray and Miami-Dade did not (except for SWAT operations and other special operations).

In the Prince George's County data set, citizen resistance was coded into seven ordinal categories, as the use of OC spray was available to Prince George's County officers and not those in Miami-Dade (in routine situations). Nonetheless, the relative scores for each agency are comparable. The following are the levels of suspects' resistance and officers' force used in the Prince George's County analysis:

1. Cooperative/no resistance. Suspect responds to verbal cues and is cooperative.
2. Verbal noncompliance/passive resistance. Suspect does not respond to officer commands and/or uses nonaggressive, noncompliance, and motionless activity in an arrest situation (e.g., uses dead weight).
3. Psychological threat. Suspect uses body language to ward off officer (e.g., clenches fists, takes defiant stance, gives angry stare, makes verbal threats).
4. Defensive resistance. Suspect is uncooperative and uses noncompliance techniques when confronted with the arrest (e.g., pulls away from officer, fails to surrender hands for handcuffing, hides behind objects). Suspect may attempt to flee.
5. Active resistance. Suspect is actively noncompliant with the arrest (e.g., fights to get free, struggles/pushes/shoves, may use feet/legs or arms/hands/fists).
6. Aggravated active resistance I. Suspect uses a nondeadly weapon(s) or threatens use to resist arrest and/or injure the officer (e.g., coming at officer with a broken beer bottle).
7. Aggravated active resistance II. Suspect uses a deadly weapon (e.g., knife, firearm, etc.) and attempts to injure the officer.

The corresponding categories for levels of police force are as follows:

1. Police presence, verbal direction
2. Strong verbal order with minimal contact
3. OC Spray
4. Defensive force, forcibly subdued suspect with open hands or feet
5. Offensive force, forcibly subdued suspect using closed hands or feet
6. Intermediate weapon
7. Deadly force
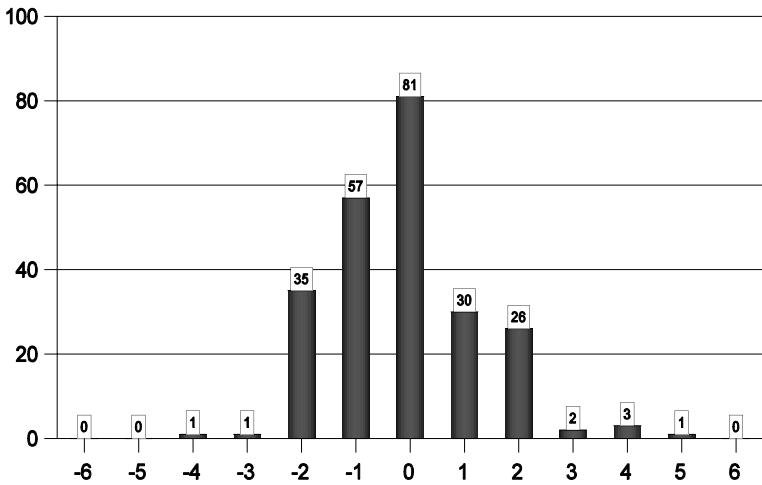
Figure 6-1. Prince George's County Force Factor, 1999.

To calculate the Force Factor, we subtracted the level of resistance (1–7) from the level of police force (1–7). The range of the Force Factor is from −6 to +6. A 0 is interpreted as commensurate force for the level of resistance (see Chapter 5). The distribution of scores on the Force Factor for the Prince George's County data is close to a normal curve, but slightly skewed to the negative side (mean = −0.12), indicating that on the average, officers use slightly less force than the level of resistance they encounter (see Figure 6-1). The bivariate relationships of these variables with the Force Factor are discussed independently. Then we analyze these variables together in a multivariate analysis to assess their relative influence on the Force Factor.

PGPD Force Factor Figure

The Force Factor and Suspect Characteristics

Five suspect characteristics were examined to determine whether they were significantly related to the Force Factor: gender, age, race, whether the suspect was impaired by alcohol or drugs, and level of suspect resistance. The suspect's gender, age, and impairment due to alcohol or drugs were not statistically related to the Force Factor scores. These factors do not affect how much force the officer uses for given levels of suspect resistance. However, the suspect's race, and obviously the level of resistance, do affect how much force the officer employs.

White suspects receive less force relative to the level of resistance than black suspects (see Table 6-5). A negative mean for the Force Factor indicates

Table 6-5. *Force Factor Means and Standard Deviations for Suspect's Race*[a]

	Mean	Standard Deviation	Cases
Black	−0.004	1.35	183
White	−0.460	1.20	28
Group totals	−0.010	1.34	211

[a] Significance = .122.

that less force is used relative to resistance. The higher the negative value, the greater is the disparity between force and resistance. The overall mean Force Factor is slightly negative, indicating that a lower level of force is being employed relative to the resistance being offered. The mean Force Factor for black suspects is nearly the same as the overall mean. The mean for white suspects, however, is a higher negative number, indicating lower levels of force relative to resistance against white suspects (Table 6-6).

Generally, the higher the level of suspect resistance, the lower is the Force Factor score. Suspects who do not resist tend to have a positive score, as any force sends the Force Factor into the positive area and is consistent with a pattern that sees force as generally higher than a level of resistance at the lower end of the resistance continuum. Scores begin turning negative at the active resistance level and continue to decrease at the aggravated active resistance level. This seems to counter the idea that as resistance increases, officers increase force at a greater rate. In fact, as resistance increases, officer force seems to decline in the force/resistance ratio.

The Force Factor and Officer Characteristics

Five officer characteristics were examined to determine whether they were significant in Force Factor scores: gender, age, race, rank, and years of service

Table 6-6. *Force Factor Means and Standard Deviations for Officer's Race*[a]

	Mean	Standard Deviation	Cases
Black	−0.380	1.28	60
White	−0.002	1.41	163
Group totals	−0.012	1.38	223

[a] Significance = .081.

Table 6-7. *Force Factor Means and Standard Deviations for Ethnic Matches between Officer and Suspect*[a]

Officer/Suspect	Mean	Standard Deviation	Cases
Black/Black	−0.460	1.16	50
Black/white	−0.250	1.71	4
White/Black	0.140	1.39	125
White/white	−0.530	1.26	19
Group totals	−0.009	1.35	198

[a] Significance = .025.

in the department. Officer age was positively correlated with the Force Factor ($r = .115$, significance = .079). The older the officer, the higher was the Force Factor score, indicating that older officers use higher levels of force relative to the level of suspect resistance than younger officers. The same pattern holds for the relationship between years of service and Force Factor scores. The more years of service, the higher is the Force Factor score, indicating that officers with more experience use higher levels of force for given levels of resistance than officers with fewer years of experience ($r = .164$, significance = .012).

The relationship between an officer's gender and Force Factor scores was not statistically significant, but for the population in our study a small difference did exist. On average, female officers used lower levels of force in relation to resistance (−0.25) than male officers (−0.11).

The relationship between an officer's race and the scores on the Force Factor is summarized in Table 6-7. On average, black officers used lower levels of force (−0.380) relative to resistance than did white officers (−0.002).

Force Factor scores indicate that higher-ranking officers use more force for a given level of resistance than lower-ranking officers. Sergeants used considerably more force than all other officers, having an average Force Factor score in the positive range (0.460). The scores for corporals came next (−0.009), indicating nearly commensurate levels of force for given levels of resistance. The lower-level officers had scores well into the negative range, indicating low levels of force exerted for given levels of resistance (−0.300 for officers and −0.560 for corporals).

The Force Factor and Ethnic Matches between Officers and Suspects

The overall relationship between Force Factor scores and ethnic matches between officers and suspects was statistically significant, yielding some differences in mean scores that are noteworthy (see Table 6-7). Both black

and Anglo officers employed lower levels of relative force when arresting suspects from their own ethnic group than when arresting suspects from the other ethnic group. White officers administered the lowest level of relative force while arresting white suspects (−0.53), followed closely by black officers arresting black suspects (−0.46). Both groups used higher levels of relative force when arresting suspects from the other ethnic group, but white officers had a much larger discrepancy than black officers. The gap for white officers between relative force administered to white versus black suspects was −0.53 to +0.14, or a 0.67 discrepancy. The same gap for black officers was −0.46 to −0.25, or 0.21. The gap was less than one-third of that for white officers, with both scores remaining in the negative. Of particular interest is the mean Force Factor score for white officers arresting black suspects, which had the only positive mean, indicating the use of force at levels higher than the level of resistance.

The Force Factor and Injuries to Officers and Suspects

Another important issue is the level of danger to the officer and suspect when different ratios of force to resistance are used. Officer injury is more likely to occur when more force is used relative to suspect resistance.

In incidents where the suspect was injured, more force was used relative to the level of resistance than in incidents in which the suspect was not injured. As force increased relative to resistance, so did suspect injury. In situations involving higher levels of violence, officers chose a higher rate of force for a given level of resistance, which explains the higher rates of officer and suspect injury in interactions that involve higher levels of force.

Multivariate Analysis

The next analysis includes the variables that are significantly related to the Force Factor placed together in a hierarchical ordinary least square (OLS) regression analysis to assess their relative influence on the Force Factor. The results for the multivariate analysis of legitimate and illegitimate variables related to the Force Factor are summarized in Table 6-8, and can be used to examine the relative importance of each variable (see Chapter 3 for a more detailed discussion).

As noted in Table 6-8, not only is the model statistically significant, but the strength of the adjusted R squared indicates that the model also explains a significant portion of the variance in the Force Factor (26 percent). Two of the legitimate criteria are statistically significant: the suspect's age and the level of suspect resistance. The higher the level of suspect resistance, the lower is the score on the Force Factor, indicating that officers use less force

Table 6-8. *Hierarchical OLS Regression of Legitimate and Illegitimate Criteria for Assessing the Level of Officer Force on the Force Factor Scores*

Independent Variables	Coefficient	Standard Error *B*
Legitimate criteria for force level		
Subject's age	−0.100*	0.008
Suspect impaired	0.001	0.026
Suspect's resistance	−0.475***	0.093
Illegitimate criteria for force level		
Suspect's gender	0.029	0.246
Officer's age	−0.151	0.022
Officer's years of service	0.315**	0.020
Officer's gender	−0.037	0.238
Officer's position	0.059	0.195
Black officer/white suspect	0.003	0.619
White officer/black suspect	0.117**	0.196
White officer/white suspect	0.007	0.327
Significance of *F*	0.000	
Adjusted *R* squared	0.257	
Number of cases	243	

* $p < 0.09$; ** $p < 0.01$; *** $p < 0.000$ (two-tailed tests).

relative to the level of the suspect's resistance when the suspect's resistance is higher. It appears that the ratio of force to resistance decreases with higher levels of resistance. In other words, as suspects become more aggressive in resisting, officers may use increasing levels of force, but actually do so while decreasing the force/resistance ratio.

Encounters involving younger suspects had higher Force Factor scores than encounters with older suspects, revealing that officers use less force relative to the level of resistance with older suspects. One explanation could be that officers temper their level of force when they recognize that the suspect is older and perhaps less threatening to them.

It is also important to note the variables that were not significantly related to Force Factor scores, that is, characteristics that do not affect the level of force. While holding constant the legitimate criteria for considering the level of appropriate force, the gender of the *suspect* is not a significant factor in the level of force used. Similarly, the age and the gender of the *officer* did not significantly affect the Force Factor score. Finally, all ethnic matches between officers and suspects except one were not statistically significant. Therefore, when legitimate factors for assessing the level of force used in a specific situation are controlled, only two illegitimate criteria are significant in the model: the officer's years of service in the department and one ethnic match.

Table 6-9. *Force Factor Distributions and Means for the Sequence of Actions*

	1st	2nd	3rd	4th	5th	6th	7th	8th
−6	—	—	—	—	—	—	—	—
−5	1 (<1%)	1 (<1%)	—	—	1 (1%)	—	—	—
−4	5 (2%)	1 (<1%)	—	—	—	—	—	—
−3	47 (21%)	28 (13%)	18 (10%)	9 (7%)	5 (6%)	3 (5%)	—	—
−2	30 (13%)	47 (22%)	36 (20%)	32 (25%)	30 (34%)	11 (19%)	6 (19%)	2 (18%)
−1	36 (16%)	64 (30%)	53 (29%)	28 (22%)	20 (23%)	9 (16%)	4 (13%)	4 (36%)
0	101 (45%)	62 (29%)	49 (27%)	43 (34%)	22 (25%)	20 (35%)	18 (56%)	4 (36%)
1	2 (1%)	1 (<1%)	7 (4%)	7 (6%)	4 (5%)	6 (11%)	2 (6%)	—
2	2 (1%)	11 (5%)	16 (9%)	8 (6%)	6 (7%)	8 (14%)	2 (6%)	1 (9%)
3	—	—	1 (<1%)	1 (<1%)	1 (1%)	—	—	—
4	—	—	1 (<1%)	—	—	—	—	—
5	—	—	—	—	—	—	—	—
6	—							
Number	224	215	181	128	89	57	32	11
Mean	−1.14	−1.06	−0.73	−0.73	−0.91	−0.32	−0.31	−0.55
Number and percent ending	9 (5%)	34 (15%)	53 (24%)	39 (17%)	32 (14%)	25 (11%)	21 (9%)	11 (5%)

The longer the tenure of the officer in the department, the more force is used relative to the level of resistance. The ethnic match of white officers arresting black suspects was found to be significant in determining the Force Factor. This situation is extremely important and should be examined more closely. Apparently, the practice of white officers using more force for given levels of resistance when the suspect is black is substantial enough to affect the overall means of the Force Factor. This would indicate more than a few white officers using greater levels of force on black suspects. In fact, a fairly consistent pattern of this practice would have to be in effect for these results to occur.

The Sequence of Actions and the Force Factor

Table 6-9 shows Force Factor scores across the sequence of actions between officers and suspects. This analysis allows us to assess the level of force used by officers relative to the level of resistance given by suspects for each of the actions in the sequence and also to compare these to other actions in the sequence. The table includes the distribution of Force Factor scores, the mean Force Factor score, and the percentage of cases reaching completion at each stage of the sequence. One hundred and eighty-one (81 percent) of the cases proceed to the third stage in the sequence of actions. Forty-four percent of the cases are terminated by the end of the third stage, 61 percent by the end of the fourth stage, and 75 percent by the fifth stage. The mean Force Factor for each stage is negative, which signifies less officer force than suspect resistance. The lowest mean Force Factor is for stage one (-1.14), and then the means taper off as one proceeds through the stages, with just two minor deviations. Only four cases fall above a 2 at the positive end of the Force Factor distribution, and only nine cases fall below a -3 at the negative end of the distribution. This means that in the vast majority of cases throughout the sequence, officers maintain a level of force that is very close to being commensurate with the resistance given by the suspect. Most of the extreme deviations that do exist are on the negative side, where officers are deploying less force than resistance. On the positive side of the distribution, there are no cases falling into the +5 or +6 categories, only one in the +4 category, and just three in the +3 category.

Conclusions

Our data indicate that most of the time officers who use force do so according to training and expectations. Most officers begin encounters with suspects using only verbal directives or strong verbal orders. Fewer than 3 percent begin their interactions by forcibly subduing the suspect, either defensively or offensively. On average, officers use lower levels of force than the level of resistance they encounter from suspects. More than half of the situations involving the use of force in the Prince George's County Police Department are at the lower end of the force continuum.

An analysis of use-of-force incidents revealed that few officer characteristics were relevant to the variance in levels of force applied. Age and number of years in the department were weak indicators of the highest level of force used. The older and more experienced officers tended to use force at either end of the force continuum, while younger officers were more likely to use intermediate levels of force. It is unclear whether officer assignment would explain these differences, or whether older and more experienced officers are more skilled in violence reduction (and therefore able to determine

when a higher level of force is necessary) than their younger counterparts. Clearly, further research on this aspect of the use of force is necessary.

The measurement of police use of force relative to suspect resistance showed that most encounters involve similar levels of force and resistance. However, there were some cases of disproportionate levels of force and resistance that need further examination. An analysis of the Force Factor scores showed that all of our variables affected the force resistance ratio. For example, male officers had a higher score on the Force Factor than female officers. Similarly, black officers had a lower score on the Force Factor than white officers. Both black and white officers employ lower levels of relative force when arresting suspects from their own racial group than when arresting suspects from other racial groups. White officers arresting black suspects had the most disproportionate level of force compared to the other ethnic matches. While there may be reasonable explanations for this discrepancy, such a pattern needs to be critically reviewed.

In a multivariate analysis that controls for legitimate criteria in the use of force, only two illegitimate criteria proved to be significantly related to the Force Factor scores: an officer's years of service and situations in which white officers arrest black suspects.

Findings and Summary

THIS CHAPTER summarizes the major findings of the original research reported in this book. The literature on police use of force has developed enormously over the years and draws on a variety of data sources, although it relies mainly on official agency records and observational studies. Each of these methods has its limitations. First, many agencies do not collect use-of-force information. Second, if the data are collected, they are often created by the officers who were involved in the action, which may bias the information. Third, the data are not uniform across agencies. Fourth, many agencies that collect information do not grant access to outside researchers. For these and other reasons we discuss, the study of police use of force is fraught with problems. Of course, other data can be used to examine an agency's use of force, including lawsuits, citizen complaints, and observational techniques, but, as we have seen, each of these methods also has its own shortcomings.

Agencies that collect and maintain use-of-force data may only require them for specific types and/or high levels of force, and not for the full range of cases. For example, one agency may only require reports for incidents when an intermediate weapon is used, while another may have officers complete specialized forms for all force used beyond handcuffing and come-along holds. Making comparisons across agencies is therefore problematic and must be undertaken with caution. Agency records are often the official police reports that are written by the officer who used force and has a particular story to tell. Although these reports are sent through the chain of command, often they are not read thoroughly or critically and approval tends to be rubber-stamped. Officers do not generally admit that the level of force they used was excessive, and agencies rarely question an officer's report, which creates a situation where there is potential for underreporting and/or institutional bias, which can skew use of force data. In an attempt to discern whether this problem is a significant one, we examined the

discrepancies between the officer's and suspect's versions of the same inci-
dent to determine the level of agreement and to assess the validity of the
information. The discrepancies that emerged from the limited data taken
from police and citizen versions of the same events indicate that there is a
need for more research on this issue.

Observing the police is an excellent way to record the interactions be-
tween a citizen and police officer before, during, and after a confrontation.
The only problem with this technique is that police use of force is a rare
event. It would take thousands of hours observing the police to view enough
use-of-force incidents to obtain a generalizable sample with respect to inci-
dent process and outcome. However, observational data will allow a more
thorough examination of how an encounter can result in suspect resistance
and use of force by an officer and the interaction of the two.

The specific use-of-force data presented in the earlier chapters relied on
official agency reports from a research site that required a first-line supervi-
sor to go to the scene of all force incidents and interview officers, suspects,
and witnesses. In addition, pictures of any injuries were taken and included
in the official report. This process represents an excellent way for agencies
to collect use-of-force information and offers a less-biased view of force than
reports that are completed by the officer who was involved in the incident.
Regardless of the data-collection method, the studies presented in this book
have made two major improvements in research on police use of force. The
first is the incorporation of the level of force used by an officer relative to a
suspect's level of resistance. The second involves an analysis of the sequential
order of events that occur in an encounter that results in the use of force.
These two improvements allow an examination of the interactive process of
an encounter rather than just the highest level of force or resistance during
a given incident. Further, our attempt to determine the difference between
the officer's version of the event and the suspect's version of the event opens
important doors for the next generation of research on police use of force.

We summarize the major findings from this research, including the results
of a national study of law enforcement agencies, development of the Force
Factor, and an analysis of the sequential order of events. Specifically, we
present results from the analysis of use-of-force reports from the Miami-
Dade Police Department (MDPD) and the Prince George's County Police
Department (PGPD).

The National Survey

The national survey requested agency-level information on the use of force
and received responses from 571 agencies, almost a 70 percent response
rate. Most of the respondents reported having a written policy on the use of
force (97 percent), and most of the policies (72 percent) were based on a

use-of-force continuum. One of the main reasons for the survey was to determine how many agencies reported the use of force. Just more than one-half of the agencies (55 percent) indicated that reports were required for any and all levels of force, which was defined as the use of fists, hands, and feet and the use of intermediate or lethal weapons. Other agencies (26 percent) utilized a specific form to capture only higher levels of force, ranging from the use of intermediate weapons to deadly force. Some agencies (17 percent) did not collect use-of-force information on a specific report and relied instead on a routine incident report. It was not clear whether the level of force used by an officer was required information, nor was there any indication that the level of suspect resistance was recorded.

Most frequently, the officer who used the force was the one who completed a use-of-force report (45 percent). In 28 percent of the agencies, two or more individuals, including the officer and a supervisor, completed a report. In 10 percent of the agencies, a supervisor filed the only report. A small number of agencies (2 percent) reported someone other than the officer or supervisor as the one responsible for completing a use-of-force report. The national survey provides an overall snapshot of use-of-force policies and reporting. The remainder of this summary reports the major findings derived from the case studies.

The Case Studies

Securing information from police agencies on use-of-force incidents can be a difficult task. For a wide variety of reasons, agencies tend not to want to share their reports and are reluctant for researchers to interview officers or suspects. One of the common criticisms of police research, therefore, is that most of our knowledge comes from a small number of cooperative agencies. The rare occurrence of force relative to the number of citizen contacts or even arrests is also a limitation with regard to studies of the use of force, and ultimately precluded the inclusion of small or even medium-size agencies from the study. The police agencies that did provide information on their use of force included those of Miami-Dade County (Florida) and Prince George's County (Maryland). Miami-Dade County is a very attractive research site because it has a very objective reporting process, including officer, suspect, and witness accounts as reported by supervisors. Because each agency collected different information and provided disparate levels of cooperation, interagency comparisons are inappropriate.

Miami-Dade Police Department

The most complex data and the highest level of cooperation were received from this agency. The data set from MDPD includes information from 1,038

control-of-persons reports from the years 1996, 1997, and 1998. Suspects ranged in age from twelve to eighty-five years of age with a mean age of thirty years. Forty-four percent of the suspects were black, 32 percent were Hispanic, and 24 percent were Anglo. Suspects who were intoxicated were only slightly more likely to resist the officer than sober suspects; however, when they did resist, they resisted differently. Intoxicated suspects were less likely to attempt to flee the officer than suspects not under the influence, but they were slightly more likely than sober suspects to resist actively or to assault an officer.

The most common injury to suspects was a bruise or abrasion (53 percent), followed by lacerations (22 percent). Suspects most often resisted with hands and arms only (70 percent), although an additional 12 percent used their fists against the officer, and an additional 7 percent used their feet or legs. Three percent of suspects used a vehicle to assault the officer, and slightly fewer used a gun of some type. Less than 1 percent of the suspects used a cutting instrument as a weapon against an officer.

The officers who used force ranged from twenty to sixty years of age, with a mean of thirty-three years. Most officers were Anglos (60 percent); 26 percent were Hispanics, and 14 percent were black. The most common level of force used by officers to forcibly subdue suspects was use of hands and fists (55 percent), while 5 percent of officers used handguns, and another 4 percent of the incidents involved K9 units.

There was a fairly strong relationship between the level of force applied and officer injury. Generally speaking, the higher the level of force used, the more likely it was that there would be an injury to an officer, although officers were no more likely to be injured in incidents involving impaired suspects than in incidents with sober suspects. The most common injury to officers was bruises or abrasions (60 percent), followed by sprains or strains (15 percent) and lacerations (14 percent). Three percent of the officers were bitten by the suspect, and another 1 percent suffered broken or fractured bones. Only 0.05 percent of the officers were injured by gunshots.

Officers were most likely to use force against suspects with the same ethnic background as themselves. The ethnic match resulting in the greatest likelihood of the offender assaulting the officer was when a black officer was arresting an Anglo suspect (36 percent). Contrast this to the likelihood of an assault when a Hispanic officer was arresting a Hispanic suspect (15 percent) or when a black officer was arresting a Hispanic suspect (17 percent).

Officers were most likely to encounter calm suspects on property crime (34 percent) and drug/alcohol-related calls (31 percent), and were least likely to find calm suspects on domestic disturbance calls (7 percent). The most highly agitated suspects were from domestic disturbance calls (40 percent) and the "other" category (43 percent).

MDPD: The Force Factor

Our study of police use of force included the suspect's resistance. We examined the force used by the officer in each incident relative to the level of suspect resistance. Overall, the Force Factor for the Miami-Dade Police Department shows that the level of force used in the majority of the incidents is similar to the level of suspect resistance. The numerically extreme incidents (beyond −1, 0, +1) should be reviewed individually for policy violations.

When the Force Factor scores are disaggregated, specific variables can be used to determine whether there is any disproportionate use of force relative to suspect resistance. For example, when only impaired suspects are considered, it is clear that they had less force used on them relative to their level of resistance than suspects who were not impaired. Another interesting but tentative finding is that female officers used significantly less force for a given level of resistance than male officers (although the numbers for female officers were small, $n = 54$). An officer's age was significantly related to the Force Factor. The youngest officers (in their twenties) used less force in relation to the level of suspect resistance, while officers in their forties used more force than the suspect offered in resistance.

Although the overall relationship between ethnic matches and the Force Factor scored is not statistically significant, there are some differences in mean scores that are large enough to attract our attention. Black and Anglo officers arresting Anglo suspects employed lower levels of force in relation to the level of resistance than other ethnic matches, and black officers used even lower levels of force against Anglo suspects than did Hispanic officers. The highest level of officer force in relation to suspect resistance occurred when Hispanic officers arrested Hispanic suspects. The other ethnic matches using the higher level of force in relation to the level of resistance were black officers arresting Hispanic suspects and Hispanic officers arresting black suspects.

MDPD: Sequential Actions in Use-of-Force Encounters

Control-of-persons reports completed by MDPD supervisors include narratives that detail the sequence of events during an encounter. Most officers began the encounter by giving suspects verbal directives (66 percent) or strong verbal orders (25 percent). Less than 8 percent began their first action by forcibly subduing the suspect, either defensively (7 percent) or offensively (<1 percent). Two percent used an intermediate weapon as their first action, and only one incident (<1 percent) involved the use of deadly force as a first action. During the second action, officers shifted to strong verbal orders (40 percent) or forcibly subdued the suspect defensively (29 percent), presumably because the suspect did not respond to the first action.

During this stage, subduing the suspect offensively jumped to 4 percent, use of an intermediate weapon increased to 3 percent, and use of deadly force increased to seven incidents (or 1 percent of the cases). By the third officer action, 48 percent of the officers shifted to forcibly subduing the suspect defensively. Subduing the suspect offensively increased to 6 percent, use of an intermediate weapon jumped to 6 percent, and use of deadly force increased to nine cases (2 percent). During the officer's fourth action, defensive force increased to 59 percent, offensive force to 10 percent, and use of intermediate weapons to 7 percent, and the use of deadly force decreased to just two cases (>1 percent). By the fifth and sixth actions, officers increased their use of defensive force to 65 percent, while the use of offensive force and intermediate weapons went up to around 10 percent each; deadly force dropped to just one case. After the sixth action, all force dropped off rapidly, except for the use of intermediate weapons, which increased to 15 percent during the seventh action and went back down to 12 percent during the eighth action. Very few cases made it beyond eight officer actions. The longer the interaction sequence, the more likely it is that force will be used. Also, citizens are usually the first to use force (e.g., resistance), while an officer's use of force is usually in response to citizen resistance.

Knowing the sequence of events during an encounter helps us understand who does what to whom and with what result. In the vast majority of cases, officers increased their level of force during the early stages of an encounter but also maintained a level of force that was very close to the level of resistance given by the suspect. A detailed assessment of the sequential action can provide agencies with a more thorough understanding of how these encounters develop and what type of training can help officers take control of suspects quickly and without injury. These findings support the idea that use of force is the result of an interactional process rather than a discrete event. Less than 8 percent of the officers began an encounter by using force, indicating that the use of force was an outcome of a (failed/failing) negotiation process.

Inconsistent Reports

The investigation of inconsistencies between the version of the encounter reported by the officer and that recounted by the suspect is an important factor in understanding the use of force. For example, the job of the supervisor who writes the report is to document each version of the encounter without making a judgment or biasing her or his report. In the MDPD data set, there are discrepancies between the versions told to supervisors by arrestees and suspects, and those recounted by officers. Many of the reports included only minor differences, or differences that can be explained by a point of view or spin on the situation. There is little doubt that an officer's

version is potentially self-serving, which is precisely why the Miami-Dade Police Department uses supervisors to collect the information and write the report. In a similar fashion, suspects are going to spin their facts to exculpate themselves with regard to the arrest and possible injury. In many cases, suspects will place all the blame for any problem, use of force, or injury on the officer. For their part, officers tend to claim that force is used only to control suspects who resist and that any force is therefore a response to a suspect's behavior. Unfortunately, it is impossible to know exactly what takes place when an officer arrests a suspect. Logic dictates that each party will report facts that are probably a biased attempt at self-justification, and so it becomes difficult to determine whether a report accurately reflects the events, which in turn has consequences with regard to research data and the processes used for gathering that data. Nonetheless, we are beginning to make some preliminary observations and to develop some ideas about gathering accurate information on the use of force.

During 1997 and 1998, there were 676 control-of-persons reports filed, and 627 included data on suspect and officer agreement. Officer and suspect versions agreed for 553 of the reports (88.2 percent) and 74 (11.8 percent) showed disagreements or inconsistencies. In other words, more than 88 percent of the reports indicated no disagreement between officers and suspects, while 12 percent of the reports had discrepancies between the officer and suspect versions of the incident. When considering the officer and witness versions, almost the same number of incidents as before showed agreements (87.7 percent) and disagreements (12.3 percent).

There are some variables that are prone to show the differences in the versions provided by officers and suspects. The data show that the calls for service with the highest discrepancy between officer and suspect accounts of the use of force are violent crimes (24 percent), property offenses (20 percent), traffic offenses (18 percent), administrative calls (16 percent), and domestic disturbances (11 percent). However, the calls for service that result in the most consistent versions between officers and suspects are also for violent crimes (34 percent), followed by administrative calls (21 percent), and property offenses (15 percent). Clearly, the calls for violent crimes are the most volatile and have a high potential for suspect resistance and officer use of force. When creating a dichotomy between calls for violent crimes and others, the calls for violent crimes represent less than 25 percent of the inconsistencies, while the others represent more than 75 percent.

There appear to be more inconsistencies for minor offenses than for serious offenses and more inconsistencies for lower levels of suspect resistance than for higher levels of suspect resistance. Also, arrest situations involving an officer and suspect of the same gender result in more discrepancies than male–female encounters. Another preliminary finding is that incidents

with Hispanic and African-American suspects result in higher rates of inconsistencies than incidents with Anglo suspects. Research on the accuracy of police reports and the differences between the officer and suspect versions of the same incident is an area of police research that demands more investigation given its potential impact on the quality of data used for research and management decisions.

Prince George's County Police Department

The Prince George's Police Department (PGPD) did not collect use-of-force data before the project started. The agency created a reporting system for the project that captured a substantial amount of information on their officer's use of force (Commander's Information Report). The data from PGPD were collected during the first six months of 1999 and included 244 reports. The actions of the primary officer and suspect were analyzed. Suspects ranged in age from thirteen to sixty-six years of age, with a mean age of twenty-nine years. Eighty-two percent of the suspects were black, 12 percent were Anglo, 5 percent were Hispanic, and 1.3 percent were Asian. Eighty-nine percent of the suspects were male, and 11 percent were female. Seventeen percent of the suspects were reported to be impaired by alcohol or drugs at the time of the incident.

Suspects resisted officers in a variety of ways. They most often actively resisted (57 percent) and defensively resisted (33 percent), but in 5 percent of the cases psychological intimidation was used, and in less than 4 percent of the cases the suspects used aggravated active resistance against the officer. Forty-one percent of the suspects received some type of injury, of which the most common type was an irritation from OC spray (28 percent), followed by bruises or abrasions (19 percent). Eighteen percent of the injuries were canine bites, another 17 percent were lacerations, and only 1 percent of the injuries were caused by gunshots.

Most of the suspects resisted by using fists, hands, and arms (76 percent). Sixteen percent used their feet or legs, and less than 1 percent of the suspects used a handgun. One percent of the incidents involved the use of a vehicle to assault the officer, and an additional 1 percent of suspects used a cutting instrument. The most common type of force used by the suspect was to strike or hit the officer (35 percent). In 26 percent of the incidents the suspect pushed or pulled the officer, whereas in 23 percent of the cases the suspect kicked the officer. Five percent of the incidents involved the suspect grabbing or holding the officer, and 4 percent of the incidents involved suspects throwing projectiles at the officer.

The officers who reported using force ranged from twenty-two to fifty years of age, with a mean of thirty-three years. Most officers were Anglo (69 percent); 26 percent were black, 4.5 percent were Hispanic, and 0.8 percent

were Asian. Eighty-eight percent of the officers were male and 12 percent were female.

The most common level of force used by officers against suspects was OC spray (30 percent). Officers used offensive force with closed hands or feet in 26 percent of the incidents. In 22 percent of the incidents the officer used an intermediate weapon, and another 19 percent of the incidents required defensive force or forcibly subduing the suspect with open hands or feet. Only 2 percent of the officers used strong verbal orders as the highest level of force, and only 1.7 percent used deadly force.

Sixteen of the officers were injured during the 244 force incidents (6.6 percent). Most of the injuries were bruises/abrasions (50 percent), lacerations (17 percent), and miscellaneous injuries (21 percent). It is significant that there were no stabbings or gunshot wounds.

PGPD: Sequential Actions in Use-of-Force Situations

The sequential order of actions in a police–citizen encounter can provide an understanding of how officers and suspects respond to each other. In the PGPD data, the suspect's first action usually was at the low end of the resistance continuum. That is, most suspects started out cooperative (26 percent), some were verbally noncompliant (19 percent), some attempted to psychologically intimidate the officer (15 percent), and others resisted in a defensive manner (26 percent). In only 12 percent of the cases did suspects actively resist during this first encounter, and only 1 percent engaged in aggravated active resistance. During the suspect's second action, in response to the officer's first action, there was more resistance. Ninety percent were resisting by the second action. Thirty-nine percent of the suspects resisted defensively, but active resistance also increased during this stage. At this point, only slightly more that 1 percent of the incidents involved aggravated active resistance. Suspect resistance continued to increase into the third suspect action, with active resistance increasing to 32 percent of the cases, although aggravated active resistance remained at around 1 percent. During the fourth suspect action, the level of active resistance attained 45 percent, although there was no aggravated resistance at this stage. By the fifth suspect action, active resistance remained high at 43 percent of the incidents, and by the sixth suspect action, active resistance was at 50 percent and remained high until the eighth action. There was a greater overall chance of aggravated active resistance in the final three stages of the encounter (2–3 percent).

The officers began encounters with suspects by giving verbal directives (48 percent) or strong verbal orders (43 percent). Five percent used OC spray, and less than 3 percent began their first action with forcibly subduing the suspect, either defensively (2 percent) or offensively (<1 percent). Less than 1 percent used an intermediate weapon as their first action, and none

used deadly force. During the second action, officers shifted to strong verbal orders (53 percent), using OC spray (10 percent), or forcibly subduing the suspect defensively (10 percent). Subduing the suspect offensively increased to 5 percent and use of an intermediate weapon to 4 percent, but only one incident involved the use of deadly force (<1 percent). By the third officer action, 23 percent of the officers shifted to using OC spray, and 18 percent to forcibly subduing the suspect defensively. During the third action, officers subdued the suspect offensively in 7 percent of the incidents, whereas use of an intermediate weapon jumped to 11 percent deadly force was used in only one incident. The fourth officer action was very similar to the level of the third, with the exception of offensive force, which rose from 7 percent to 16 percent. By the fifth and sixth actions, officers increased their use of OC spray (as high as 39 percent), along with other types of force, notably the use of intermediate weapons (which increased to 21 percent). This pattern continued for the cases that make it to sixth, seventh and eighth actions. Very few cases made it beyond the seventh action ($n = 12$). As the police–citizen encounters continue, the possibility of injury increases.

Findings indicate that the suspect's first action is significantly related to suspect injuries. It is interesting that defensive resistance results in the greatest chance of suspect injury (68 percent), except for the few suspects who resisted in an aggravated way (who all received injuries, $n = 3$). Suspects who begin the interaction using psychological intimidation are the least likely to receive injuries (23 percent). The suspects who begin the interactive process with an officer by being cooperative often end up resisting, which results in 38 percent of suspects being injured.

There was a fairly strong relationship between the highest level of officer force used and the chances of an officer injury. Increasing levels of officer force correspond to higher probabilities of officer injury, with the exception of incidents where the officer used an intermediate weapon. There were no injuries to officers when they used OC spray. When offensive force was used, 15 percent of the officers were injured. With the use of intermediate force, injuries decreased to 6 percent, however, the injuries jumped to 50 percent when officers used deadly force.

Suspects who are under the influence of alcohol or drugs have first actions that are more likely to be at the low end of the resistance continuum than unimpaired suspects. That is, impaired suspects are more likely to be cooperative (32 percent vs. 25 percent), to use verbal or passive resistance (32 percent vs. 17 percent), and to use psychological intimidation (20 percent vs. 14 percent) than are unimpaired suspects. Impaired suspects are also much less likely to engage in defensive resistance (5 percent vs. 30 percent).

Generally, female officers are more likely than male officers to use lower levels of force. Specifically, female officers are much more likely to rely on

strong verbal orders (7 percent vs. 1 percent of male officers) and to use defensive force (25 percent vs. 18 percent). Female officers are slightly more likely to use OC spray. Male officers are more than twice as likely as female officers to use offensive force (28 percent vs. 11 percent of female officers), and all four cases of deadly force involved male officers.

There is a significant relationship between an officer's race (black vs. white) and the highest level of force used. Interestingly, black and white officers are almost equally represented at the two extremes of the force continuum (strong verbal orders and deadly force). However, at intermediate levels, there are notable differences. For example, black officers are nearly twice as likely to use OC spray as white officers (43 percent vs. 24 percent), whereas white officers are more than three times as likely to use defensive force (7 percent vs. 23 percent) and are and less likely to use offensive force (24 percent vs. 33 percent). Finally, white officers are more than twice as likely as black officers to use intermediate weapons (26 percent vs. 12 percent).

There is a significant relationship between an officer's years of service and the highest level of force used. As with to the relationship between age and level of force, there seems to be a curvilinear relationship between years of service and the highest level of force used. Less experienced officers seem to be more likely to choose a level of force in the middle of the force continuum, and more experienced officers seem to be more likely to choose levels of force at the lowest and highest ends of the force continuum. It appears that older and more experienced officers are able to make finer distinctions in the level of force required in different situations than younger officers.

PGPD: Officer and Suspect Ethnicity

Cross-tabulations between the race of the officer and suspect (white vs. black) in force situations show that black officers are more likely to use force against black suspects than are white officers. In 93 percent of the incidents where black officers used force, it was against black suspects. The comparable figure for white officers using force against black suspects is 87 percent. Thirteen percent of the time that white officers used force it was against white suspects. The comparable figure for black officers is only 7 percent. These differences could be due to a tendency to deploy officers in areas with a preponderance of citizens from their own ethnic background, but clearly the results require further inquiry.

Data comparing officer–offender ethnic matches and the level of suspect resistance show that white officers arresting either white or black suspects are the most likely to receive higher levels of resistance (74 percent and 63 percent, respectively). Black officers arresting either black or white suspects

were less likely than white officers to be met with active resistance or higher levels of resistance (58 percent and 50 percent, respectively).

White officers arresting black suspects used higher levels of force than any of the other groups, which all used comparable levels of force. Black officers arresting white suspects used only slightly higher levels of force than the remaining two categories (black officers arresting black suspects, and white officers arresting white suspects). It is interesting that both black officers and white officers used the lowest levels of force against suspects from their own ethnic group.

Different calls for service resulted in different levels of applied force by the PGPD officers. OC spray was used most often on administrative and "other" calls (60 percent and 52 percent, respectively) and least often on traffic calls (8 percent). Violent crime calls resulted in the most situations requiring a suspect to be forcibly subdued with closed hands (39 percent). However, using intermediate weapons was found to be most likely on property offense calls (54 percent) and traffic calls (38 percent). Only 8 percent of domestic disturbance calls required the use of intermediate weapons, and deadly force was used only four times: three times on traffic calls and once on a violent-crime call.

PGPD: The Force Factor

Although the range of numbers for the PGPD Force Factor differs from that for the MPDP Force Factor because PGPD officers use OC spray, the interpretation of the numbers is the same. The overall mean Force Factor is slightly negative, indicating a slightly lower level of police force relative to the level of suspect resistance.

The Force Factor mean for black suspects is nearly the same as the overall mean. The mean for white suspects, however, is a higher negative number, indicating lower levels of force relative to resistance is applied against white suspects when compared to force against black suspects.

We examined several officer characteristics to determine their relationship to Force Factor scores. Older officers used higher levels of force relative to the level of suspect resistance compared to younger officers. Similarly, officers with more years of service have higher Force Factor scores, indicating that they used higher levels of force relative to suspect resistance than officers with fewer years of experience. On average, female officers used lower levels of force in relation to resistance than male officers, and black officers used lower levels of force relative to resistance than white officers.

The overall relationship between Force Factor scores and ethnic matches between officers and suspects reveals some important differences. Both black officers and white officers employed lower levels of relative force when arresting suspects from their own ethnic group than when arresting suspects

from the other ethnic group. White officers while arresting white suspects, followed closely by black officers arresting black suspects, administered the lowest level of relative force. Both groups used higher levels of relative force when arresting suspects from the other ethnic group, but white officers have a much larger discrepancy than black officers. The Force Factor mean score for white officers arresting black suspects is the only positive mean, indicating that white officers used of levels of force higher than the level of resistance with respect to our two measures. Overall, when officers used higher levels of force relative to suspect resistance, their chance of being injured increased.

PGPD: The Sequence of Actions and the Force Factor

Our analysis allowed us to assess the level of force used by officers relative to the level of suspect resistance for each of the actions in the sequence. We found that the incidents included several stages. Forty-four percent of the cases are terminated by the end of the third stage, 61 percent by the end of the fourth stage, and 75 percent by the fifth stage. The Force Factor means for each stage are all negative, indicating the use of less officer force relative to suspect resistance. The lowest Force Factor mean is for stage one, after which the means taper off as one proceeds through the stages. In the vast majority of cases throughout the sequence, officers maintain a level of force that is very close to the level of resistance given by the suspect. Most of the extreme deviations are on the negative side, where officers are deploying less force than resistance. Most officers begin encounters with suspects by using only verbal directives or orders. Fewer than 3 percent begin their interactions by forcibly subduing the suspect, either defensively or offensively. On the average, officers use lower levels of force than the level of resistance they encounter from suspects. More than half of all the force situations in the Prince George's County Police Department were at the lower end of the force continuum, and the use of OC spray was the most frequently used method of subduing suspects.

A Final Comment on the Data from MDPD and PGPD

The overall distributions of the Force Factors for the Miami-Dade County and Prince George's County Police Departments are quite similar. The means for both counties are slightly in the negative range: the Miami-Dade mean is −0.14 and the mean for Prince George's County is −0.12. On average, officers use slightly less force than the level of suspect resistance they encounter in both counties. The greatest number of cases fall in the middle of the distribution, as expected, and thin out quickly as the disparity between force and resistance increases. For example, in Miami-Dade County

52 percent of the cases have commensurate force and resistance, and 94 percent fall between −1 and +1, indicating very little discrepancy between force and resistance. The cases for Prince George's County were dispersed slightly more than the Miami-Dade cases. Thirty-four percent of the cases have commensurate force and resistance, and 71 percent fall between −1 and +1. This was expected because the measures of force and resistance had more categories than the Miami-Dade County measures, resulting in a greater dispersal of cases. However, in both counties, very few cases involved disparities between force and resistance greater than two intervals. As an overall assessment, these findings indicate that, on average, force is being applied that is commensurate to the level of resistance.

In spite of the overall similarities in Force Factor averages and distributions between Miami-Dade and Prince George's Counties, some important differences emerge when the Force Factor averages were compared between and among various groups of cases. For example, there is not a significant difference in Miami-Dade County between the average Force Factor means when force is used on black versus white suspects. However, in Prince George's County, white suspects receive less force relative to their level of resistance than black suspects. While the Force Factor means for both blacks and whites is in the negative range, indicating less force than resistance on the average, the mean for white suspects is a much higher negative number. The data from Prince George's County raise a red flag indicating the need to collect more information, possibly leading to targeted training and corrective action.

The implications for the Force Factor as a measure are promising. The Force Factor appears to be doing its job as a relative measure of police use of force. It has the capability of summarizing overall trends and practices in the use of force relative to resistance and in distinguishing differences in force/resistance ratios being applied to various subgroups of cases.

Another important conclusion is the change in relative force through the sequence of interactions between the officer and the suspect. In both Miami-Dade and Prince George's Counties, Force Factor means are lower (more cases on the negative side of the distribution) during the first two stages of the interaction process. Then, as the officer and suspect proceed through the sequence of interactions, Force Factor scores increase. In some of the later stages the scores increase to zero or slightly into the positive range. This indicates that, as the interactions between officers and suspects become more prolonged, officers begin applying more force for given levels of resistance. This trend follows the expected force continuum, which is used by both agencies. In most instances the level of force declined after the third stage in the sequence. This seems to indicate that officers often apply higher levels of force only after trying repeatedly to subdue the suspect with lower levels of force relative to the resistance given.

These two areas of research, the relative level of force used by the police and the sequential order and level of action, both deserve further attention. Researchers and agencies must consider each of these issues when arriving at policy modifications and disciplinary decisions.

Finally, the Force Factor measure can be an effective tool for police departments to evaluate force practices and variations in the use of force within their departments at a variety of levels (e.g., the individual officer, deployment, specific units, or the overall department). The resulting information would be invaluable for improving officer supervision and training and would help advance research on the nature of officer use of force and suspect resistance. However, for this to be possible, changes need to be brought about in use of force reporting by many departments, especially in light of the inconsistencies seen in Chapter 5. Departments must develop procedures to collect adequate information on use-of-force incidents throughout the sequence of actions and reactions. To advance interdepartmental research, agencies will have to establish standardized measures of force and resistance.

The trend in empirical data collection shows an increasing awareness of the problems and the complexities in the analysis of the information. However, the research findings we have presented, coupled with those from previous studies, provide a solid foundation and understanding of those police–citizen encounters that result in the use of force. While we have made significant improvements over the years in the empirical study of force, theories on police use of force have not been advancing at the same pace. Our final chapter incorporates research findings and conceptual notions from the social sciences to construct a theory that explains police use of force and helps us understand all police–citizen encounters.

Explaining Police Use of Force

The Breakdown of an Authority Maintenance Ritual

> The central meaning of police authority is its significance as a mechanism for "managing" relationships. (Reiss and Bordua, 1967:25)

THE PURPOSE OF THIS CHAPTER is to propose a broad conceptual and theoretical construct to enhance our understanding of what we know about police use of force. In addition, the constructs we present can be used to direct future research on police use of force. The results of the cumulative methodological and substantive advancements in research on police use of force outlined in previous chapters provide the backdrop for the development of our theoretical framework.

Methodological progress is evident as researchers have shifted their focus from relying on personal narratives of independent observers (many of whom were involved in the police–citizen encounters) to representative data collected from official records and systematic observations. The assessment of police use of force has evolved from dichotomous measures of force or nonuse of force, to measures of levels of force, and finally to interactive measures taking into account both police use of force and citizen resistance within a sequence of connected actions and reactions.

Substantively, much has been learned about use-of-force incidents. Early studies were descriptive, detailing the amount, the degree, and the types of force used, as well as how the use of force differed in various types of incidents. Later, during the 1980s, more information became available on factors associated with using force and the different types of force, including various categorizations of individuals and situations. During this period, researchers such as Albert Reiss, Jr., and Richard Sykes began developing concepts and initial explanatory constructs to better understand police use of force. We have now reached a point in the cumulative development of knowledge where we can begin to construct a theory of police use of force.

Although this will be a long and difficult process, it will be worth the efforts of police researchers to refine and test the theory.

In this chapter, we take a first step in that direction by proposing a theoretical construct that is consistent with what we have learned to this point from previous research and the findings from our own efforts to improve on past research. We also offer some thoughts about the future direction of use-of-force research. We begin by laying down the broad conceptual framework of an interactive model.

Interactions

Police officers' behavior is often determined by the nature of their interactions with members of the public. Similarly, suspects are likely to react to the officers' actions, comments, and demeanor. The interactive context of police–citizen encounters is therefore critical if the behavior of both officers and suspects is to be understood. A considerable amount of research attention has been devoted to police discretion and to specific types of police activities, but conceptual or theoretical constructs that link these behaviors are conspicuously absent. For example, officers' discretionary decisions concerning the use of force and arrests have only been studied as isolated events, ignoring common factors that link these actions together within an interactive framework. Similarly, most of the research devoted to police use of force has been atheoretical, focusing primarily on the attitudes, personality, and demographic characteristics of police officers and suspects (Geller and Toch, 1995). Further, analysis and interpretation of use-of-force data have proceeded ad hoc without a guiding theoretical or conceptual basis. We propose a theory we call *authority maintenance theory*, which can explain what we have learned about police–citizen interactions that result in force, and should provide a framework to guide future research on police use of force.[1]

The authority maintenance theory is an attempt to explain police–citizen interactions from a normative and interpersonal perspective rather than from the perspective of psychological characteristics or personal attributes. Although our focus is on police use of force, we believe the theory also applies to the interactive processes involved in other police–citizen encounters. The term "authority maintenance" is used to characterize the theory because it captures the exaggerated role that authority plays in police–citizen interactions, and also acknowledges the overriding concern of officers with maintaining their authoritative edge in interactions with citizens. We begin this chapter by presenting the constructs of the authority maintenance theory,

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[1] This is a micro-level construct. See Alpert and MacDonald (2001) for a discussion of macro-level theories.

including an examination of the authority maintenance ritual. We also discuss the theoretical tradition that provides the framework for the authority maintenance theory and highlight the need for a theoretical foundation to guide this type of research. Then we advance a series of propositions to show how the theory's explanatory power can be used to understand police–citizen interactions generally, and more specifically police officer use of force. Finally, we discuss how the theory can direct future research.

The Authority Maintenance Ritual

The notion of social rituals has been used to characterize accepted and routine interactions through which one actor shows respect and regard for another (Goffman, 1959). To the extent that the focus of routine police–citizen interaction is the officer's exercise of authority and the citizen's submission to that authority, such encounters can be characterized as authority maintenance rituals.

Using principles developed by Blumer (1937), Homans (1958), Blau (1964), and Goffman (1959), among others, one can use the authority maintenance theory to explain the processes and outcomes of police–citizen interactions. Goffman (1959) outlined several purposes of interaction rituals, such as ensuring that one's self-concept remains intact and that the actors are able to anticipate each other's expectations within an interaction. Interaction rituals typically involve a standardized exchange of actions and reactions that supports the expectations of both parties. This is the principle of reciprocity. While most police–citizen interactions include some degree of mutual ratification of actors' expectations, interactions that involve force signify a breakdown in the principle of reciprocity. Once this occurs the actors have abandoned the goal of *mutual* benefit or cooperation and the interaction has deteriorated into one in which *personal* goals take precedence. Obviously, when reciprocity breaks down in an interaction, it is much more likely to result in officer use of force and/or suspect resistance. Before we enter into a detailed discussion of the authority maintenance theory, we examine the theoretical traditions that provide the foundation for the theory.

The Theoretical Tradition

Goffman (1959, 1961) developed an explanation of intended and unintended actions that take place in social interactions (including those between police and citizens) by integrating theoretical strands from Blumer's views on interaction and Homans' ideas on exchange. Although Goffman is attributed with this notion, it was Blumer who coined the term symbolic

interactionism in 1937 (Blumer, 1937). Goffman outlined this process as follows:

> The performer can rely upon his audience to accept minor cues as a sign of something important about his performance. This convenient fact has an inconvenient implication. By virtue of the same sign accepting tendency, the audience may misunderstand the meaning that a cue was designed to convey, or may read an embarrassing meaning into gestures or events that were accidental, inadvertent, or incidental and not meant by the performer to carry any meaning whatsoever. (Goffman, 1959:51)

In a police–citizen interaction, the "convenient fact" for the officer is his or her authority or perceived superior position and role compared to that of the suspect. The "inconvenient implication" is often the suspect's unwillingness to defer to the officer's wishes or commands. These represent some of the costs and benefits of the actor's behavior that are the focus of traditional exchange theory (Heath, 1976; Meeker, 1971:485). Emerson (1972a, b) advanced exchange theory by developing the power-dependence theory. This construct can be applied to police–citizen contacts because the actors are dependent on each other for the outcomes, which in turn are based on the actors' behavior and behavioral cues. Recently, research on the structure of power relationships and the use of power has focused on reciprocal exchanges (Molm, Peterson, and Takahashi, 1999), which is a parallel development to the authority maintenance theory. This line of research demonstrates the need to focus on the reciprocal nature of interactions and the important role of authority to the outcome.

As a representative of the legal and moral authority or power of the state, the police officer expects the citizen to defer to his or her authority and to act accordingly. In a Durkheimian sense, the officer represents the sacred. Because of an officer's explicit status, citizens are obligated to express deference. When a citizen is brought into an encounter by the police, there is an expectation on the part of the officer and the general public that a citizen will show deference to the officer's authority because of his or her status as a suspect. A suspect who shows deference reestablishes himself or herself as an individual willing to be part of the moral and legal community. Refusing to show deference to the authority of the police suggests rejection of the principles of the moral and legal community, which is Durkheim's image of the profane. Because the normative expectations concerning power are asymmetrical, deference should be expressed differently downward than upward, with the higher-status actor not expected to show the same level of response as the lower-status actor. The obligation on the part of a citizen to show deference is proportionate to her or his status or power. When a citizen has been defined as a suspect, the asymmetry of the relationship will be even greater than normal. If the suspect deliberately decides to disregard

the orders of the officer, or fails to show deference and/or actively resists the officer, the officer's response is likely to become increasingly aggressive, thereby creating still greater asymmetry. Austin Turk (1966) offered one interpretation of this notion, approaching criminology from a conflict perspective.

Turk developed a theory of norm resistance in which he argued effectively that the social order is based on a "consensus–coercion balance" maintained by those in power (Bernard, Vold and Snipes, 2001). His theory can be applied to police–citizen interactions by focusing on the probabilities of types of relationships or actions between less powerful citizens and those in authority (the police) and estimating levels of norm resistance (Lanza-Kaduce and Greenleaf, 2000). Turk (1966) stated, "Norms, not whims are being defended, and coercion is occurring not in the course of interpersonal conflict, but rather as members of a collectivity play out the patterns of expectation–violation–coercion that, in large part, characterize the collectivity" (pp. 343–4). This interpretation of encounters closely resembles ideas set forth by Goffman with its roots in studies of exchange and social interaction. While Turk's theory is helpful by providing a framework for examining police use of force, his theory focuses on conflict in the police–citizen dyad as the dependent variable instead of on police behavior, which is our dependent variable.

Donald Black (1984) introduced a general theory of social control to explain any process by which people define and respond to deviant behavior, which would include police use of force as a special, and perhaps, unique type. He argued that to treat social control as a dependent variable is to acknowledge that it differs from one situation to another, and that it is possible to predict and explain these differences. He discussed how social control varies in social space, and specified several "varieties of normative behaviors" or social control. For example, social control may vary by the form it takes or the mechanisms by which a person or group expresses a grievance. One such form involves only the principal parties, while another may include others such as an arbitrator or what Black calls a settlement agent. Black not only defined categories and types of form (e.g., unilateral, bilateral, negative reciprocation), he also introduced the possibility of creating subtheories, such as "a theory of self-help," "a theory of avoidance," "a theory of support," and "a theory of settlement." Black gave similar discussions concerning styles of social control and the quantity of social control. Further, Black suggested developing various models of social control for explaining each kind of social control (Black, 1984:20). In Black's framework, police use of force is a specific alternative response to deviance or a specific form of social control. These recurrent conflict structures often imply a specifiable range of social control and a somewhat unique setting, which requires a specific model to explain them. Police–citizen interactions are one such example.

The authority maintenance theory provides an explanation for social control in a unique setting, which has a broader range of parameters than social control in other settings. No other setting allows the use of force or deadly force and has such well-defined roles and procedures for the exercise of authority. Further, few settings have such imbalanced power or authority in which one actor is expected to control the interaction totally (the police) and the other actor is expected to acquiesce totally (the suspect). Black's more general theory of social control lays the groundwork for the authority maintenance theory, which provides a specific model to explain the unique conflicts arising in police–citizen encounters. As such, we view the authority maintenance theory as a response to Black's proposal that specific models of social control be developed. The authority maintenance theory is specifically devised to explain interactions arising in a particular "setting in which numerous conflicts arise routinely from one day to another" (Black, 1984:25).

Sykes and Clark (1975) integrated the rules of Blau, Blumer, Homans, Emerson, and Goffman for encounters and interactions with Turk's concept of normative resistance and outlined a framework for studying all police–citizen interactions:

> We wish to propose an explanation of police behavior based on a sociological (normative) and interpersonal construct rather that on what is more essentially a psychological (working personality or prejudice) construct. Police behavior must be explained in terms of the rules which order their relations with civilians and which are usually mutually acknowledged by both officers and civilians. Among these rules we posit the influence of an interpersonal norm governing police–civilian relations which we shall term an "asymmetrical status norm" (after Brown, 1965) and which is evident in many relations between those of unequal status in addition to police and citizens. Police are of higher status than many citizens with whom they interact . . . We hypothesize then that this difference in status influences the flow of deference so that it is expected that it will be expressed differently downward or upward. This difference in the flow of deference also explains many otherwise anomalous facets of the police–civilian relationship. (Sykes and Clark, 1975:586)

Although the conceptual framework of Sykes and Clark's deference exchange theory is a necessary element in an explanation of police–citizen interactions, its scope is insufficient and too narrow to study all police–citizen contacts that result in police use of force or suspect resistance. Deference-exchange theory focuses only on deference, while the authority maintenance theory encompasses all behavior across the deference–resistance continuum. As noted previously, police–citizen encounters revolve around the officer's exercise of authority (coercion) and the citizen's submission to that authority (deference or resistance). While deference is an important aspect of these interactions, it is only one response to authority. Other responses exist on a continuum ranging from extreme deference to violent resistance.

Although it can be argued that all behavior can be interpreted as a degree of deference, we contend that some types of responses involve more than a lack of deference. For example, a suspect who simply ignores a police order is admittedly showing a lack of deference but is also engaging in a form of mild resistance. A suspect who pulls a gun on an officer is showing more than a lack of deference. This behavior is therefore characterized as active resistance: A lack of deference is passive, whereas resistance involves an active response. Consequently, the authority maintenance theory incorporates a broader range of behaviors than the deference-exchange theory, extending to both ends of the deference–resistance continuum.

Interactions in which a citizen resists the police or in which an officer uses force are the most serious police encounters. As officers and citizens negotiate the maze of their relationship and as interaction unfolds, an officer who expects submission to his or her authority may have this expectation interpreted by a suspect as expressing "police" superiority. In turn, a suspect's refusal to submit to police superiority may be interpreted by the officer as a rejection of the moral and social compact and the officer's real or symbolic status. As both actors begin to discredit each other, one may become threatening and the other threatened by force or the potential use of force. The sequential decision-making process in potentially violent police–citizen encounters has been described as "a contingent sequence of decisions and resulting behavior – each increasing or decreasing the probability of an eventual use of deadly force" (Binder and Scharf, 1980:116).

When actors do not respond as expected in an encounter and defiance escalates, actions such as a "look," a furtive movement, or any other difficult-to-measure gesture may have greater explanatory power for levels of force that occur between police and citizens than measures of attitudes, personality, or demographic characteristics. Based on the constructs of the authority maintenance theory, descriptive variables and ascribed characteristics of officers and suspects are not fully capable of explaining the variance in the level of force or the level of force relative to the level of suspect resistance in an encounter. The explanation of variance in relative levels of force requires an understanding of factors that influence the exercise of and response to authority. These factors include nonverbal cues and language or actions between an officer and suspect as the encounter unfolds.

The Authority Maintenance Theory

Our development of the theory of authority maintenance to explain police use of force follows the theory-construction model suggested by Blalock (1969). This model includes three general stages of development: first, we formulate the general concepts of the theory; second, we develop a set of propositions implied by the authority maintenance ritual; and third,

where appropriate, we deduce testable hypotheses logically derived from the propositions.

General Concepts

In addition to our explanation of the authority maintenance ritual, it is important to provide specific definitions of other concepts critical to the authority maintenance theory.

The concept "authority" is central to the theory. We use authority here in the Weberian sense, as a particular form of power to direct or control the behavior of others, based on the acceptance of its legitimacy by those over whom the power is exercised (Weber, 1946). It is interesting that Weber's concept of authority involves an interaction: the power of the holder of authority, and the acceptance of its legitimacy by the object of the power. As such, the authority of the police officer is a type of legal authority (Weber's term is rational–legal authority), under which submission is "based upon an impersonal bond to the generally defined and functional duty of office" (Weber, 1946:295). There are other types of authority based on how it is legitimated. Most forms of authority are attached not to individuals, but to the social positions and statuses they occupy in the social system. Thus, social statuses can be seen as indicators of levels of authority. For example, adults generally have more authority than children, members of the upper class generally have more authority than members of the lower class, and, in many societies, men have more authority than women. Of course, any type of authority only exists when members of that society accept the authority as legitimate in some way and therefore submit to it. Under this definition of authority, the status of police officer carries various types of authority, only one of which is legal authority. Likewise, the suspect or citizen interacting with an officer also carries some degree of authority. While most of the legal authority is given to the police officer, the suspect has some legal authority as a citizen in the form of citizen's rights and preexisting legal restrictions on the officer's behavior. However, more important, the citizen has varying degrees of what Weber called traditional authority (Weber, 1946). Unlike legal authority, traditional authority is not based on laws, but on informal rules or a collective sense that the authority is proper and legitimate, or on a longstanding custom, and should therefore be accepted as legitimate. Of course, forms of authority are seldom isolated and tend to interact in most situations, so the police officer has several types of authority, as does the citizen. However, legal authority provides the officer one marked advantage. In spite of this, the degree of authority varies for both the officer and the suspect, depending on the nonlegal types of authority each holds. The balance of this authority affects both the officer's and suspect's behavior, sometimes resulting in a relaxed, accommodating interaction, and at other

times resulting in hostility that can become extreme enough to involve the use of deadly force.

A theory explaining police–citizen interactions and their outcomes should include a set of propositions that account for the unique nature of these encounters: The centrality of authority in the interaction, the extreme asymmetry of authority in the relationship, and the breakdown of the principle of reciprocity are all key elements in such encounters.

Propositions

Proposition One: Police–Citizen Encounters Must Be Understood as an Interaction Process Rather Than as Discrete Events

Peter Manning (1977) concluded from his observations of the police that "Social control encounters, those where reaction to deviance is central, involve degrees of mutual dependency, thus all rule enforcement is a matter of negotiation"(p. 211). Researchers must tap into the negotiation process to understand the behaviors of the actors. This proposition also relies on conclusions from previous empirical research (Friedrich, 1980; Smith, 1986; Bayley and Garofalo, 1989; Adams, 1999; Engel et al., 2000). The paucity of nonprocess variables with adequate explanatory power has directed attention toward a process model. When a police officer and a citizen enter into an interaction, one actor (police officer) makes a request, demand, or gives an order and the other actor (citizen) responds to this behavior. This action and reaction create an interactive process that changes, fluctuates, takes on a life of its own, and leads to a specific conclusion (Blumer, 1969).

Previous data on police use of force have been limited to the highest level of force used, which does not allow assessment of the suspect's actions or the use of a time-ordered analysis. This unsatisfactory level of measurement has precluded analysis of the effect of one actor's behavior on the other. For example, it has been impossible to determine which actor escalated or deescalated the hostility of the interaction and why the actions occurred.

In order to understand the full implications of police–citizen encounters, data must be collected that indicate the sequential order of events, and they must be analyzed to show the effects of actions at one stage of the interaction process on the actions taken during subsequent stages.

Proposition Two: Police–Citizen Encounters Are a Unique Type of Social Interaction Because the Major Criterion Regulating the Interaction Is the Balance of Authority or Power among Actors

While authority is one of many competing criteria regulating most types of social interactions, in police–citizen interactions it dominates the process,

reducing all other criteria to secondary status. The officers' authority in relation to the authority of the suspect overshadows other types of regulatory criteria (age, gender, race, and social class). An actor's demand for deference to anticipated authority is a critical factor that determines the outcome of the encounter (e.g., the use of force or resistance). As a result, many of these encounters digress into an authority maintenance ritual instead of a more common and balanced social interaction. An example of this digression comes when the officer becomes more concerned with establishing authority than encouraging voluntary compliance and cooperation. Patently, officers can strengthen their authority and heighten their status by an act of enforcement (Manning, 1977).

Research on these interactions must measure comparative levels of authority between the actors. Because it is difficult to measure an individual's actual or perceived authority during a police–citizen encounter, it may be appropriate to rely on proxy measures. For example, an individual's personal characteristics or social status can indicate perceived authority, but only if they are measured in relation to the officer's statuses. Characteristics such as age, gender, and ethnicity are commonly captured on police reports and may be the best readily available indicators. Personal characteristics alone have not been successful in predicting police use of force, but if they are integrated into a relative measure of the suspect's status, they can be useful. Obviously, better measures of authority need to be collected, such as the officer's perception of the citizen's social class, position, and demeanor. These improved measures go beyond commonly collected police information and require observational techniques and measures of officer perceptions.

A hypothesis derived from this proposition is that the level of force exercised by an officer is directly related to the perceived threat to the officer's authority. Once officers perceive that a suspect is failing to defer to their legitimate authority, attempts will be made to restore their authoritative position in relation to the suspect. One way to accomplish this is to exert force.

Proposition Three: Police–Citizen Encounters Are More Asymmetrical with Respect to Authority Than Most Other Types of Interactions

Only a few social interactions are structured to give the type of imbalanced authority found in police–citizen encounters. The citizen is socialized to view his or her role as passive and accommodating in these encounters while the police officer is socialized and trained to be insistent on and protective of his or her authority (Sykes and Clark, 1975). To analyze this relationship, it is important to consider the disparity between an officer's level of authority and that of the suspect. These differences should be analyzed using comparisons

or matches between officer and suspect. One hypothesis following this proposition predicts a greater level of force when an officer's traditional authority is significantly higher than that of the suspect, a relationship within which the officer expects higher levels of deference from the suspect. Similarly, when the officer's traditional authority is significantly lower than that of the suspect, no force or low levels of force will be used because the officer expects lower levels of deference from the suspect due to the more balanced authority levels between them. However, it should be noted that our interaction model dictates that we factor in the behavior of both of the actors (officer and citizen). In this vein, some research has found that citizens of lower status (e.g. a Black suspect confronted by a White officer) are more likely to bestow deference to the officer than citizens of higher status (e.g., a White suspect and a Black officer) (Lanza-Kaduce and Greenleaf, 2000). In this case, the suspect's higher level of deference shown to the officer might offset the officer's greater proclivity to use force in this type of situation. Research models must include the traditional authority of both actors and each actor's response to the perceived authority of the other to be able to make sense of the behaviors displayed and the outcome of the interaction.

Proposition Four: Police–Citizen Encounters Are a Unique Type of Social Interaction Because Expectations and Behaviors Often Violate the Principle of Reciprocity

Typical interactions involve a standardized exchange of actions and reactions or dialogue in which both actors receive ritual support. These interactions provide repeated opportunities for actors mutually to reach their desired outcome (Goffman, 1959; Emerson, 1972a, b). Of course, all police–citizen interactions violate the principle of reciprocity in terms of legal authority. As discussed earlier, the police officer has most of it and the citizen has very little. As a result, ideally neither the officer nor the citizen will expect equal reciprocity.

The principle of reciprocity is also violated in other ways. Once police force or suspect resistance is introduced into the interaction process, the principle of reciprocity is violated because the actor using force has attempted to take control of the situation. Further, it is typical for police officers to hold expectations that they should always control the situation and that the citizen should accommodate their expectations completely, prohibiting any reciprocity. It is not uncommon for the expectations of suspects to violate the principle of reciprocity by failing to yield at all to the officer's authority by fleeing the scene, physically resisting, or openly showing disrespect for the officer's authority. Police administrators often

comment on how one officer can engage a suspect and accomplish an arrest in an accommodating fashion without incident, while another officer in the exact same situation will create hostility and a lack of cooperation that may result in a "knockdown, drag-out fight" or possibly the use of deadly force. Just as officer use of force or suspect resistance signals a breakdown in reciprocity, a breakdown in the reciprocity of an interaction will create a greater likelihood of suspect resistance and/or officer force in the interaction.

Because of the importance of reciprocity among actors in maintaining a peaceful and cooperative interaction, an analysis of police–citizen encounters should determine at what point reciprocity breaks down in the interaction process and which factors explain this breach of expectations. Hypotheses derived from this proposition predict that specific factors will result in a breakdown of reciprocity, which will end in the use of force or physical resistance.

Reciprocity is violated when either party's goal realization is blocked (Sykes and Brent, 1980:183). Sykes and Brent put forth four officer goals that are typical of police–citizen interactions. The first is to *obtain information* concerning the situation or problem so that they can define the situation adequately and know how to respond to it. For example, an officer attending to a call for service needs to determine the identities of the participants (e.g., suspect, victim, bystander) before taking any action. The second goal is to *establish behavioral order*, which may involve stopping any violence or other types of victimization, establishing orderly communication, such as speaking in turn, and keeping bystanders safe and out of the scene. A third goal is to *obtain respect from the involved citizens* by insisting on being treated respectfully by the citizens. It is important for the officer to establish his or her authority over the situation. Finally, Sykes and Brent include a fourth officer goal during an encounter with citizens: to *achieve an appropriate resolution of the situation or problem.*

A citizen may have very different goals from an officer. In fact, many times police and citizen goals concerning the encounter are in serious conflict, creating very complicated and difficult interactions. Perhaps the most important goal of citizens during such encounters with the police is to maintain their projected identity (e.g., innocent of any offense, being the victim rather than the offender, appearing as though they are not fleeing or evading the police).

Reciprocity is most likely to break down when one or both of the parties determine that their goals are not being realized due to the behavior of the other. If they determine that the interaction is not progressing in a manner favorable to realizing their goals, it is at this point that they are most likely to abort the normally expected interaction process and pursue their own

interests without regard for the expectations of the other (e.g., fleeing, using violence, etc.).

Proposition Five: Officers Respond to Goal Blockage with Varying Degrees of Regulation Depending on the Type of Blockage

Sykes and Brent (1980) argued that officers will usually resort to force (coercive regulation) only after trying several other types of regulation: definitional and imperative. They argue that officers take charge of the situation most often simply by asking a question, stating,

> In asking a question the officer not only immediately defines a domain of consequence to the professional activity, but focuses the attention of the civilian on this same domain. By use of the question the officer assumes cognitive, or what we shall term definitional, regulation over the situation. By paying attention to the question, the civilian inevitably ends by committing himself to the cognitive domain which the officer asserts by merely asking the question. (Sykes and Brent, 1980:184)

More importantly, definitional regulation may also involve negotiation of the actors' identities, especially the identity of the civilian. For example, is the citizen an actual suspect, a violator, or a witness?

More specifically, definitional regulation may take the form of an accusation that directly affects the suspect's identity and role in the interaction. Sometimes officers exert more direct regulation over the interaction by issuing a command or a nonviolent threat (Sykes and Brent, 1980). Sykes and Brent call this imperative regulation, such as a command to stop fleeing or to be quiet. Officers often arrive on very disordered scenes and need to establish order and their authority over the situation before pursuing their other goals of obtaining information and citizen respect, and deciding on a proper resolution to the situation.

Obviously, there are occasions when neither definitional nor imperative regulation is sufficient to control the suspect or the situation at hand. It is in these cases that officers will use coercive force, according to Sykes and Brent (1980). Both threatened and actual force are included in coercive force. Most police departments have defined a continuum of force and train their officers to use the level of force appropriate to the level of suspect resistance. This results in officers deciding on varying degrees of regulation depending on the level of resistance. A hypothesis consistent with this proposition is that officers perceiving role blockage are more likely to use force against the suspect. Another hypothesis is that officers will choose a level of force depending on the citizen's level of resistance (Sykes and Brent, 1980:188). Further, the officer will become more forceful as the number of frustrated goals increases (Sykes and Brent, 1980:188).

Proposition Six: Citizens Respond to Goal Blockage with Varying Degrees of Resistance

Similar to officers, citizens are more likely to violate the principle of reciprocity when they perceive that the officer is blocking their goals. They may respond with varying types and degrees of resistance. One level of resistance is *passive resistance*, which includes evading or hiding from the police. Another type of resistance is *active resistance*, which involves impeding the officer's movement, being aggressive, fleeing the scene, or physically resisting the officer's order. The most serious type of citizen resistance, *assaulting the officer*, incorporates actions that are intended to cause injury. A hypothesis consistent with this proposition is that suspects perceiving role blockage are more likely to resist the officer. Another hypothesis is that suspects will resort to higher levels of resistance as the number of frustrated goals increases (Sykes and Brent, 1980:188).

Proposition Seven: The Resistance/Force Sequence Escalates until One Party Changes His or Her Expected Goals Voluntarily or Involuntarily

Because police–citizen encounters often entail expectations held by the two parties that are inconsistent and in severe conflict, the interaction sequences that occur are often complex. These sequences usually begin with negotiation, proceed to lower levels of force and resistance when negotiation fails to reach any mutually acceptable outcome, and may escalate into higher levels of force and resistance until one party is willing to change his or her expected goals. The willingness to change may come about voluntarily, such as the suspect saying, "OK, OK, I've had enough," or involuntarily, such as the officer being overpowered by the suspect, allowing the suspect to flee.

Our goal has been to accumulate and organize the theoretical insights derived from previous research traditions into a comprehensive theory that begins to explain these most serious police–citizen encounters. It is important to understand that theoretically relevant factors are only important because of the meaning attached to them by the other actor(s), and because they influence the interactive process that brings about the final outcome of the interaction, whether it is peaceful accommodation or hostile behavior.

Conclusion

The theory of authority maintenance is based on the notion that police–citizen encounters are interactive and asymmetrical with respect to authority. In other words, behavioral cues and responses to these cues are guided by

the respective actor's power and status (Molm, Peterson, and Takahashi, 1999).

Propositions One and Two of the authority maintenance theory describe the nature and type of information that is necessary to test the theory. The nature of police–citizen encounters requires data on the interactive processes of the actors, as police use of force is similar to any human engagement that is a result of a series of interactions. However, unlike most other human encounters, results from contacts involving the police rely more on authority. At the heart of the authority maintenance theory is the third proposition, on the asymmetrical nature of police–citizen contacts. This supports the notion that an officer will use greater force when his or her authority is significantly undermined by the actions of a citizen. Future research should incorporate perceptual measures of authority from police officers that include the nonverbal gestures, dress, and the demeanor of citizens. Debriefing officers after use-of-force incidents to understand their perceptions would provide important information on how to best operationalize the concept of authority.

One of the explanatory variables is the type of call to which the officer is responding. Our data show that officers may prepare themselves differently to respond to different types of calls. This may lead them to expect higher levels of resistance from suspects on certain calls, and may consequently cause them to respond with force, or a higher level of force, than is necessary. Similarly, suspects may be more likely to challenge police authority when they have not committed a serious offense. In this case, officers may be seen as having less authority than when they respond to a call for a serious crime.

The authority maintenance theory extends to situations beyond use of force, as suggested by the fourth proposition, which incorporates the principle of reciprocity. Interactions that result in force have clearly broken the principle of reciprocity. Other incidents, which may include threats, gestures, and loud or profane language, and which do not digress to the use of force, have also broken the principle of reciprocity. Research is needed to identify the factors that trigger the breakdown of reciprocity in police–citizen encounters. Propositions Five and Six identify goal blockage as an important factor that can trigger suspect resistance and officer force. For the theory to be tested in nonforce incidents, however, the behavioral measurements will have to be more specific and identifiable. Finally, Proposition Seven addresses changes in the resistance/force sequence and specifies one major factor that can lead to a deescalation of the violence.

As knowledge about these encounters accumulates and the theory is refined, we should be able to predict the outcome of many police–citizen interactions. The social world of policing is composed of communication through ongoing processes or messages, many of which are threatening to

other actors. Necessarily, when interacting, police and citizens must interpret and respond to these messages.

Peter Manning (1977) took Goffman's (1959) approach to encounters and identified this aspect of police work as "drama," or the selective presentation of behavior that serves to send a message to another actor. His thesis is that police officers can present aspects of themselves that will likely elicit certain responses from citizens. Manning proposed an artistic interpretation of the socially constructed content of the communication transferred between and among the actors. He stressed that the interaction can be in the form of a "game" played by both actors. The primary contribution of our work, then, is the development of the authority maintenance theory, which moves Manning's and others' artistic interpretation of police–citizen encounters into empirically based and testable hypotheses.

Our effort to understand police use of force is underscored by the role it plays in society. The nature of violence in general, and police violence in particular, has guided our journey. What we have discovered from past research and our own findings has led to the conceptual and theoretical framework we call authority maintenance. However, these are only the beginning stages of a complex theory that will require additional research and testing to become fully developed. It is a step toward a better understanding of the interactions that occur in routine police–citizen encounters, and especially in those rare interactions that end in the use of force. The more we know about police use of force, the officers, the suspects, and their reciprocity, the more likely it is that we will be able to teach officers how to respond effectively to suspects who resist their efforts to enforce the law.

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Appendix

Frequencies of Force Sequences for First through Tenth Actions

Actor	Level of Force	1st N	1st %	2nd N	2nd %	3rd N	3rd %	4th N	4th %	5th N	5th %	6th N	6th %	7th N	7th %	8th N	8th %	9th N	9th %	10th N	10th %
Officer	Presence	441	66	148	23	62	11	19	5	9	4	3	2	1	1	1	4	—	—	—	—
Suspect	Cooperative	364	54	66	10	63	11	39	9	31	11	22	15	12	15	12	31	1	20	1	33
Officer	Strong order	168	25	259	40	151	27	79	20	35	15	17	14	14	19	5	20	2	40	1	50
Suspect	Verbally resist	152	23	215	33	122	21	64	15	33	12	13	9	13	16	5	13	2	40	1	33
Officer	Defensive force	47	7	185	29	256	48	234	59	156	65	80	65	41	56	14	56	2	60	1	50
Suspect	Defensive resist	120	18	235	36	185	32	147	33	114	42	51	35	26	32	11	28	1	20	—	—
Officer	Offensive force	3	0.4	24	4	34	6	39	10	16	7	12	10	5	7	2	8	—	—	—	—
Suspect	Actively resist	26	4	120	18	190	33	180	41	91	33	58	40	30	37	11	28	1	20	1	3
Officer	Intermediate weapon	13	2	22	3	31	6	29	7	23	10	12	10	11	15	3	12	—	—	—	—
Suspect	Nondeadly weapon	7	1	6	0.9	11	2	6	1	5	2	2	1	1	1	—	—	—	—	—	—
Officer	Deadly force	1	0.1	7	1.1	9	2	2	0.5	1	0.4	—	—	1	1	—	—	—	—	—	—
Suspect	Deadly weapon	4	0.6	10	2	13	2	4	1	1	0.4	—	—	—	—	—	—	—	—	—	—

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