Defining the Occupational Definition of Police Excessive Force

by

Stephen T. Holmes

A dissertation submitted in partial fulfillment of the requirements for the degree of

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In partial fulfillment of the requirements for the degree of

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In the Division of Criminal Justice
Of the College of Education

1997

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M.A. University of Louisville, 1990
B.S. University of Louisville, 1988

Doctoral Committee:
Professor James Frank; Chair
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Abstract

The use of force, its prevalence, and its definition are problems that have evaded researchers and practitioners for the better half of two centuries. While we may never be able to tap the prevalence of police use of force incidents, we may be able to analyze the multitude of factors related to its use. With the affirmation of Graham v Conner (1989) by the Supreme Court, we currently have a legal standard dictating that police use of force at any level can be justified so long as the officer is acting like other reasonable officers given the same set of circumstances. However, the question still remains, what is reasonable?

This work attempts to answer this question by asking officers to respond to a simulated police citizen encounter where the suspect is actively resisting. The included encounters are presented in the form of a vignette. Using a factorial design, each police-citizen encounter is composed of randomly selected individual and situational level variables that the extant literature has found to be correlated with instances where the police use force.

This survey was distributed to 800 police officers attending use of force training modules at the Ohio Peace Officers Training Academy in London, Ohio. Following each vignette, officers are asked to evaluate how many warnings they would issue to an potential suspect prior to using physical force. And are prompted to respond to the level appropriate and highest level of force they would consider either appropriate or reasonable from a list of officer responses arranged in a continuum of force.

The results in Chapters 4, 5 and 6 denote two primary findings. First, officers from different background ground perceive situations differently. Specifically, white officers are more likely than black or hispanic officers to believe that higher levels of force are both necessary and appropriate. And second, the results of this study indicate that there are three primary determinants of the level of force that officers believe determine the level of force that should be used. These three include the gender of the suspect, level of resistance and the overall threat that the situation presents to either the officer or those in the immediate surrounding area.
Acknowledgements

When one has taken as long as I have to complete a my doctoral education, it is virtually impossible to thank all persons who have made significant contributions in my academic development. So I know that I inevitably will leave someone or their contributions out. For these omissions, I apologize. But in the interests of brevity, I will limit my acknowledgments to those whose assistance was crucial to me starting and finishing this dissertation.

I first wish to thank Drs. Sally T. Hillsman, Winnie Reed and Thomas Feucht of the National Institute of Justice. These individuals took a chance and hired a struggling young Ph.D. student who had yet to begin his dissertation. From my first interview to the day I defended this work, these individuals have provided me with the time, support and motivation to keep working to fulfill this dream. Not only did these individuals allow me the means in which this work could be completed, but they also expedited my intellectual development. I shall never forget a meeting I had with Sally last spring, when she shared with me her goal for the Institute. She told me that she would know when she had been a success when one of recently departed staff members sent back a student to the Institute to develop. If I have anything to do with it, that day is not far off.

I also am grateful to the assistance of several of my good friends, both through graduate school and at the Institute. Bob Kaminski got me interested in police force issues. Dr. Steven M. Edwards was a great sounding board for me at times when I needed to blow of some steam. Dr. Nancy La Vigne who as an office mate, colleague, and friend, prodded me daily to keep pressing on. Richard Lewis and Cherise Fanno for providing numerous memorable social outings. Dr. Jeffrey Ross for our weekly lunch trips to Ollies and for serving as my own person cash machine. And last, but not least, Louis Mock for her kindness, friendship and commitment to sound research.

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I wish to thank my wife, Amy, for putting up with me during the last six years. While the last place she wanted to raise three children was Washington, D.C., she agreed to move on a moments notice to further my career and academic growth. While I would like to mention how kind and understanding she was of the processes of higher education, I can not. Her consistent harassment and questioning of my dedication to carry this product through, “inspired” (and I use that term lightly) me to keep nose to the grindstone, if for nothing else, to show her that I would and could do it.

And finally I wish to thank and dedicate this work to my father. Not only did he give me life (as he repeatedly tells me,) but he gave me the strength, support and drive to aspire to such a noble occupation as an academic. I remember one day sitting in his office as a freshman at the University of Louisville and saying something really stupid like “One day I want to be a college professor too. Think about it, you only have to only work 9 hours a week, and you get to go home anytime you want.” These words, I have lived to regret. I now know, how arduous of a career choice this has and will be. I only wish that one day, I will make my son eat his words like I am doing now.
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Chapter 1
Introduction and Statement of the Problem

Introduction

The relationship in a democratic society between the police and the public is one that has been labeled a “balanced tension” (Bittner, 1970; McLaughlin, 1992). Scholars such as Goldstein (1977:1) and Manning (1977) noted that the police “are an anomaly in a free society.” Others, Lundman (1980) and Langworthy and Travis (1994), noted a “dynamic tension” between the police and the public, contrasting the concepts of liberty and civility. These authors state that on one hand we have a government that protects individual rights and freedom of expression. On the other, the state authorizes a police force that is given “almost” unlimited freedom to use coercion and force to make people behave in certain ways.

Police use of force whether justified or not, can have grave effects on individual citizens, officers, departments, states, and communities as a whole (Friedrich, 1980). For instance, an unjustified killing by a police officer results not only in loss of life, but community outrage may lead to civil disturbances, riots, property damage, political jeopardy, job termination for the offending officer and civil liability for all interested parties (Blumberg, 1993). These consequences of police force have historically plagued the public’s perception of the police (Pate and Fridell, 1995). For instance, Smith (1994) and Montgomery (1980) noted that public perceptions of misuse of force were one of the precipitating causes of the Chicago riot of 1919, the Harlem disturbance of 1935, the Watts riot of 1965, and the Miami riot of 1980.
Given the significance of the problem and possible community ramifications, it is not surprising that police use of force has received considerable attention lately. Citizens, academics, practitioners, as well as legislators, have begun to ask the important questions. These questions include: how often do the police use either appropriate or excessive force? What circumstances precipitate the use of force? And what officers are more likely to use it (Friedrich, 1980:83)?

**Incidence and Prevalence**

How pervasive the problem of excessive force by the police is within our nation is currently unclear. Although several studies have concluded that the illegal use of force is extensive, no reliable estimate of its magnitude exists (Conklin, 1981:56; Kania and Mackey, 1977; Kobler, 1975). In fact, after concluding a nationwide survey of 1,111 police agencies, Pate and Fridell (1993) found that there is little information available regarding the extent to which police use even marginal amounts of force. Furthermore, Hirschel (1994) found that a relatively large number of departments do not record the use of most types of force. When they do, reports are typically required only when injuries or complaints result from a confrontation.

Compounding this problem, Reiss (1970:33) stated that “police chiefs are notoriously reluctant to disclose information that would allow us to assess the nature and volume of complaints against the police.” Illustrating the extent of either the lack of acknowledgment of the problem or the intentional failure to disclose sensitive information, when the Virginia Association of Chiefs of Police initiated a use of force survey in 1993, only 23 percent of departments surveyed responded (Virginia Association of Chiefs of Police, 1994).
Although the threat of police use of force is present in all aspects of law enforcement, the frequency where force is used and defined as excessive is rare (Chevigny, 1969). It has been suggested that if we are truly interested in how pervasive the use of excessive force by the police is within our communities, we should look to the community in order to gauge their perceptions of the magnitude of the problem (Ross, 1996). However, citizen surveys must be treated cautiously since the public’s conceptualization of how often and to what degree the police routinely use force is shaped by extensive media coverage of highly publicized incidents (Rudosvsky, 1992). As such, the public’s perception of the extent to which police-citizen interactions involve force may not be an accurate indicator.

For academics, use of force knowledge is not much better. Aside from research on deadly force, there is sparse mention in the literature about the utilization of low levels of force within police-citizen encounters. Pate and Fridell (1993: 21) claim that our current knowledge base on police force is based on researchers’ intuition, personal experiences and limited ride alongs with the police. Adams (1995) and Klockars (1995) both agree that data on police use of force is just as difficult to attain as interpret.

The first reason why so little is known about the extent to which police use force is that measurement of this phenomenon is extremely difficult. There is no study indicating the prevalence of police force without validity problems (Alpert, 1994; Pate and Fridell, 1993). Early observational studies base their conclusions on limited sample sizes, inadequate training of observers and questionable inter-rater reliability. Official records may indicate departmental biases in record keeping. Counts of successful litigation may include systematic biases thereby conservatively underestimating the
prevalence of excessive force. Finally, surveys of police officers often tap only the socially desirable responses since officers are often unwilling to reveal to researchers personal beliefs or behaviors on such a sensitive topic to those who may not fully understand the dynamics of a heated police-citizen encounter (Pate and Fridell, 1993; Dillman, 1983).

The second reason why so little is known about the application of police force is that there is no clear definition of what acts or circumstances comprise justifiable force much less excessive force. Police force or the escalation in the amount of force used must be thought of in terms of all the individual, situational, organization and communal factors both known and unknown to the officer at the time of the encounter. Klockars (1996) claims that the proper standard for judging the proper amount of force to be used by an officer in a given situation must come from the same source where every other profession finds it standards, within the policing profession. He states that improper force need not be maliciously or sadistically applied to be considered excessive. Rather, improper force may result from good intention, mistakes, a misreading on a situation, prejudice or even inadequate training.

The Present Study

The existing research has addressed several features associated with police force. First, theorists have suggested that the authority to use force is a central tenet of the police occupation (Bittner, 1970, Langworthy & Travis.) Second, researchers examining the prevalence of use of force have suggested that it is rarely part of policing (Worden, 1995; Pate and Fridell, 1993; Skolnick and Fyfe, 1993; Reiss, 1970; Friedrich, 1978; Chevigny, 1969.) And third, research during the past two decades examining the
correlates of police use of force have suggested that a variety of situational, individual
and community factors appear to be related to police-citizen encounters where force was
used. However, to date, very little, if any attention has been directed at factors that
influence when and how much force officers should use in a given situation.

To begin to appreciate the complexity of situations where the police use force,
one must conceptualize force not as a static concept but rather a continuum of responses,
ranging from verbal commands to deadly force. Unfortunately, extant research has failed
to examine those factors that influence an officer’s decision to use one type of force over
another. While researchers have not looked at this, the Supreme Court has set some broad
guidelines. For example in 1986, the Supreme Court etched the interpretation of
excessive force in case law with the decision of *Graham v. Conner*. In this decision, the
Court laid out the “objective reasonableness standard” that mandates that actions of
officers involving questions of use of excessive force be “judged from the perspective of
a reasonable officer coping with a tense, fast-evolving situation.”

The Court also addressed the use of deadly force in the case of *Tennessee v. Garner* (1985). In this case, the Court ruled that the state can legally “seize the life of an
individual” when an officer believes that a suspect’s actions places in jeopardy either the
life of the officer or other citizens nearby. By phrasing their decision under the auspices
of an individual’s fourth amendment protection, the Court left the lower courts to
interpret the extent to which nature of the officers’ actions matched the suspect’s right to
be free from their loss of liberty.

These Supreme Court decisions, while providing a general standard for the
efficacy of police behavior fail to provide some type of specific criteria that officers may
use when deciding whether to use force and the extent of the forcible intrusion. The present study will provide insight into officers’ operational definitions of these Supreme Court decisions.

In order to provide officers with some guidelines as to when, and in what situations, force is needed, officers attending a voluntary training course at the Ohio Peace Officers Training Academy were administered a survey containing a single vignette and asked to respond to three questions. First they were asked how many verbal warnings they would issue prior to using physical force. Second, they were be prompted to denote the level of force they would consider appropriate. And third, officers were asked what the highest level of force they would consider reasonable given the factors presented in this artificially created event.

Through the implementation of this survey and the subsequent analysis contained in this work, two things will accomplished. First, the law enforcement profession will be presented with some broad parameters as to the profession’s opinions of the thresholds of appropriate police force. And second, the results of this effort will provide the profession with a first attempt to model a variety of individual, situational, and community factors that affect differing perceptions of the efficacy of appropriate police force.

Before begining, we must acknowledge the role that force plays in the function and duties of police officers, and the conceptual issues involving an officer’s discretion of when, where, and how the officers choose to invoke the law. We must remain cognizant of how officers across the country are trained to use force, and acknowledge both the formal and informal mechanisms designed to curtail unnecessary force. It is also important to our understanding of the use of force to have a firm grasp of the legal
decisions leading up to the implementation of the Graham standard. The remainder of this chapter will cover these issues and lay the contextual groundwork for this study.

**The Role of Force and It’s Essential Elements Defined**

The key to conceptualizing the use of force, its application and community ramifications lies in the role that force or coercion plays in the lives and careers of our nation’s law enforcement officers. Bittner (1970) and others claim that the capacity to use non-negotiable coercive force is at the core of the police role in society (Sherman 1980; Reiss 1971; Scharf and Binder, 1983; Walker and Fridell, 1993). So basic is the element of force to the police, that Langworthy and Travis (1993) claim that the reason we call the police is based on the belief that force may be necessary. This force legitimately and properly applied, is an essential element of maintaining an ordered society.

Before proceeding with this discussion it seems imperative that we define exactly what is meant by force. Kania and Mackey (1977:29) define force as the “exertion of power to compel or restrain the behavior of others.” Generally, police force can be classified into several modal categories. In the past, the general categories used to describe force have been deadly vs. non-deadly, physical vs. non-physical, reasonable vs. excessive and extralegal vs. unnecessary. Generally speaking deadly force is defined as force that is likely to cause death or serious bodily harm. Conversely, non-deadly force is that force that is not likely to result in death or serious bodily harm (Pate and Fridell, 1993). Physical force implies the touching or prodding of a resistor to comply with a state agent’s demands. Whereas non-physical force implies the use of threats or other verbalization techniques to gain compliance (Clede, 1987).
Other researchers have conceptualized force at a more complex level. One of the first researchers to operationally define the difference between reasonable and excessive force was Albert Reiss. Reiss (1967) in his study of three large metropolitan police departments classified force as reasonable if it were used in terms of defense of self or others and if its application was needed in order to make an arrest. For Reiss, excessive force was defined as force that did not meet this criteria.

Tackling only force which appears out of the public’s normative boundaries, Fyfe (1993) differentiated between extralegal and unnecessary force. According to his definition, extralegal force is that force which is inflicted willfully and knowingly beyond the bounds of the officer’s office or authority. Whereas unnecessary force is that violence that occurs when a well-meaning officer because of haste, lack of training, or an inability to communicate with the citizen, mishandles a situation and resorts to violence without need. The key to the distinction of Fyfe’s two categories is the intent of the officer, although both are unacceptable and inappropriate applications of police force.

The key to dissecting this issue in the larger sociological context was addressed by Bittner (1970) in his classic work *The Functions of Police in Modern Society*. In his perspective, it is not important that we divide force into deadly or non-deadly categories. He claims that the distinctions in types of use of force, whether it be lawful or unlawful, justified or unjustified, legal or non-legal are meaningless because no one knows what the thresholds of appropriate force utilization are. Similarly, Reiss (1968) states that the conditions under which force is utilized is a fuzzy one since judgments are made by real
people, under stressful conditions attempting to resolve a situation quickly and efficiently.\(^1\)

The distinctions in the various types of use of force appear on the surface to be straightforward; however when examined more closely the collective agreement disappears. This is especially true when the distinctions involve greater levels of coercion. While we all would agree that excessive force is unnecessary, would we also agree that all unnecessary force is also excessive? It is clear that Fyfe would not. However, coercive actions taken by the officers that deprive any person of liberty, or cause some type of duress that is more than necessary is unreasonable and by default excessive.

**Use of Force Continuums**

Prior stated differences in the concepts of excessive and reasonable force do not help the average lay person or officer remove the ambiguity in the meanings of these phrases. Because it is not possible to specify the appropriate police response to every given situation, police department trainers and academics have developed numerous ways to conceptualize the escalation of police force. These conceptual models have been since labeled as “use of force continuums”. Use of force continuums acknowledge that police force is not a static concept or an issue that an abstractly stated policy statement can deal with. Rather these typologies recognize that police-citizen confrontations are dynamic. Faulkner (1991) states that force is “not just a word, a push or a pull, but all of the above in a rapidly advancing random order.” Furthermore he states that it is best to think of

\(^1\) Also see (Bittner, 1970).
police-citizen encounters in terms of areas of resistance and control. It is within these areas that police force must be understood.

Faulkner (1991) and others claim that proper training on the use of force through the avenues of resistance and control can help define within modal categories, when and what officer responses are necessary given a narrowly defined scenario (O’Linn, 1992; Independent Commission of the Los Angeles Police Department, 1991; Graves et al., 1992). Serving as a training officer with the Ohio Peace Officer Training Academy, Faulkner defined an “action-response use of force continuum” that explains officers’ responses to resistors’ actions. As shown in Figure 1.1, Faulkner (1991) conceptualizes that officer responses to individual actions vary along twelve dimensions. The lower end of the responses begin with the officers’ presence while the upper end culminates with the infliction of deadly force. O’Linn (1992) explains that since law enforcement officers are expected to make split second decisions based on rapidly evolving situations, the incorporation of a use of force continuum into departmental policy will provide the guidance to officers in making force decisions.

Although these continuums are useful for training and policy setting, they provide very little information for academics delving into the subject quite simply because there is very little information on the actual levels of resistance that officers encounter. To clarify this point, Conner (1991) found that 95 to 97 percent of all police-citizen contacts involve cooperative subjects. Thus, it is not hard to see why there is virtually no information on how and under what circumstances force is used, given the limited amount of data that we have detailing police-citizen encounters, coupled with the rarity of
the actual utilization of police force (Pate and Fridell, 1993; Worden, 1995; Croft, 1985; Skolnick and Fyfe, 1993; Reiss, 1970; Chevigny, 1969).

*Figure 1.1*

**ACTION-RESPONSE USE OF FORCE CONTINUUM**

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<td></td>
<td>Assistance from Other Officers</td>
</tr>
<tr>
<td></td>
<td>Verbal or Physical Command</td>
</tr>
<tr>
<td></td>
<td>Officer Presence</td>
</tr>
</tbody>
</table>

**OFFICER-SUBJECT FACTORS**
1. Age
2. Sex
3. Size
4. Skill Level
5. Multiple Subjects/Officers
6. Relative Strength

**SPECIAL CIRCUMSTANCES**
1. Closeness of Weapon
2. Injury Exhaustion
3. Being on the Ground
4. Distance from Subject
5. Special Knowledge
6. Availability of Other Options

*Adapted From Samuel Faulkner’s Use of Force Continuum (1991)*

The concept of a continuum of force is the primary focus for this study. More specifically, having the dependent variable arranged in a continuum of possible responses will provide a more complete understanding of the dynamics and discretionary choices that officers’ face in potential force incidents. More specifically, officers were asked to select a response from a continuum of force after reading a vignette containing randomly assigned individual, situational, and community factors. Their responses will permit us to model and predict the thresholds of the profession’s opinions regarding the determinants of appropriate police force.
The Role of Discretion and the Authorization to Use of Force

The decision of police officers to intervene, much less employ force, in a given incident is a subset of their discretionary choices facing them everyday. As noted by Davis (1969:4) “a police officer …may be said to exercise discretion whenever effective limits of his, or her…power leave the officer…free to make choices among possible choices of action or inaction.” As such, the decision to use force and decisions concerning the extent of force to be used are within the discretion of police officers. Thus, an individual officer must decide in each situation whether to ignore, confront or coerce a citizen to follow his/her orders. But as Goldstein (1977) points out, discretionary decisions regarding when, where and how much force to use is a cumulative process. Once a course of action is decided upon, additional discretionary choices follow that may lead the officer to either increase or decrease the level of force used.

The decisions of whether or not to intervene and how much formality is required by the officers are made at the level of line patrol officers. Departmental policy and training mechanisms may serve as a guide for officers; however, much of the work of these officers is hidden from the organization and never recorded in some official format (Goldstein, 1977). Black and Reiss (1971) argue that when citizens initiate the encounter by calling the police, the encounter becomes a method of public record and conversely becomes visible to the department. However, when an officer initiates an encounter on his own, the incident remains invisible unless the officer files a report or the citizen files a complaint possibly because of his/her dissatisfaction with the provided police service. It is within the police initiated encounter that discretion and the potential for abuse is the
highest. Understanding each police-citizen encounter in this light, it is easy to see how difficult it can be for police administrators to control police force.

These discretionary choices, Williams (1983) claims, are one of the most important aspects of a patrol officer’s work and grow out of the realities of our legal system. If we consider the fact that state statutes are often ambiguous, were never meant to be enforced, or are obsolete, it is no wonder police officers use their discretionary choices to handle situations informally. In any case, few police training materials or policies give considerable attention to concrete situations where police force is properly administered or applied.

As one can see, the vast amount of discretion given to police officers regarding the use of force is and can become a problem unless administrative controls are established. Hence, if a department wishes to reduce the incidents or risk of excessive force complaints in police-citizen encounters, they must set sound policies to guide discretionary choices to prevent situations from evolving into incidents where excessive force may be employed. And as we know, very few departments are willing to limit the discretionary choices available to line personnel. So to date, use of force policies have been over ambiguous about what is and what is not an acceptable force response (O’Linn, 1992).

Recognizing this problem, Klockars claims that the enormous scope of officers’ authority to use force is at the heart of the problem in defining and controlling use of excessive force. He states that: “Police are institutions or individuals given the right to use coercive force by the state within a state’s domestic territory” (Klockars, 1985:12) By defining the police in this way, Langworthy and Travis (1994) note that it allows us to
consider the police both as individuals and organizations whose defining element is the state authorization to use force. This authorization given to the police is not without constraints. Kerstettler (1985:149) notes that any inappropriate use of force “undermines public support and the credibility that the police need to function effectively.” In order to maintain the police as an agency made of the people and for the people, some control must be maintained over the application of force. This study will examine those situational, individual and community based factors that influence officers’ discretionary decision making process.

**The Criminal Law and Excessive Force**

The discretionary choices open to officers to resolve disputes are extensive, however, they are not without limits. One of the constraints placed on the decision either to use or to use one form of force over another is the criminal law. While the coercive methods which the police use in order to make an arrest, serve a warrant, or bring situations under control would be considered criminal if they were attempted by anyone other than police officers. State authorization to use coercive force is lawful in all 50 states if it can be shown that the officers acted reasonably, while on duty, to reach legitimate law enforcement ends (Klockars, 1995). Even though state legislatures and departmental policies provide officers with a host of coercive techniques in dealing with citizens, there are limits. For example, officers found to use excessive force either sadistically, frivolously, or while not on duty are subject to criminal sanctions (*Johnson v Glick*, 1973).  

2 Aside from state and departmental guidelines for acceptable behavior by

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2 The Glick decision established four criteria to be considered before a plaintiff could obtain redress for an abuse of force complaint. These criteria include: the need for the application of force; the relationship between the need and the amount of force used; the extent of injury inflicted and if the force was applied in good faith to maintain or restore discipline.
officers, there are few legal remedies that victims of excessive force can invoke without taking up a Federal Title 18 suit. Under this federal law, officers are subject to a penalty of up to $1,000 fine and imprisonment for one year to life, if a death results for any person who: “under the color of law, statute, ordinance, regulation or custom willfully subjects any inhabitant of any state, territory or District to the deprivation of any right, privileges, or immunities secured or protected by the Constitution or laws of the United States.”

While the penalties attached to Title 18 are rather grave, the filing of federal suits claiming a constitutional deprivation seldom make it to court. There are three reasons for this. First, suits are screened by a prosecutor with whom the credibility of the plaintiff pails in comparison with that of the officer. Second, Geller and Scott (1992) found that there is a reluctance of witnesses of fellow officers to come forth due to fear of reprisals. And finally, these authors claim that the public is generally unwilling to punish the police with penalties normally reserved for criminals.

As one might expect, the successful prosecution of officers for use of excessive force/deadly is an extremely rare event (Katz, 1991; Kobler, 1975; Waegel, 1954; Hubler, 1991; Levitt, 1991). Demonstrating the rarity of criminal prosecution, Petrillo (1990) found that San Diego police officers were absolved in all 190 shootings by officers from 1985 till the end of 1990. Similarly Blumberg (1989) found that criminal prosecutions were filed for only 1 in 500 officer shootings.

Aside from issues around deadly force, a recent study completed by the U.S. Civil Rights Commission on police misconduct found in one jurisdiction that the number of incidents of reporting of abuse of force to police is increasing. In a series of reports, they
found that in Milwaukee, of the 301 complaints filed, only fourteen went to a hearing. Of these cases, 13 were found not to meet the necessary burden of proof, and only one was sustained (Thomas, 1995).

Civil Liability and the Use of Excessive Force

The second constraint placed on officers guiding their discretionary choices as to when and how much force to apply is the actual or threat of civil litigation against the officer, the department or both. While criminal prosecution of officers for use of excessive force is rare, civil litigation is not. Any time an officer uses force, the possibility of a civil suit exists. Federal civil rights statutes can provide the grounds for a civil suit for those who have been victims of excessive force. In both federal and state cases, departmental guidelines or policies concerning use of force are central to the establishment of civil liability. Should a policy exist, the failure to act within its broad guidelines implies that an officer may not have been operating with an appropriate standard of care. If no such policy exists, or it does not address the issue at hand, the department and city may be at risk for a civil judgment.

Demonstrating the prevalence of civil suits, McCoy (1987) in a survey of cities with a population of 100,000 or more, found that the majority of police departments have been sued and expect to be sued in the future. Klockars (1995) suggests reasons, aside from obvious monetary gains, why these claims have flourished in the civil arena. First, the level of culpability of the offending parties is much lower in civil suits as opposed to criminal litigation. Second, in civil suits there are no screening mechanisms like prosecutors in criminal cases. Third, the plaintiff and his/her attorney are free to choose their own forum, and often choose to file a suit in federal court. Fourth, the rights of
discovery are less restrictive. Fourth, the cost of defending a department or an individual against such a claim pales in comparison to the cost of a compromised settlement. And fifth, in federal cases, lawyers fees are recoverable if the plaintiff’s complaint is sustained. For these reasons, Klockars (1995:14) claims that the settlement of plausible civil claims for use of excessive force are often a cost effective alternative.

**Legal Decisions Affecting Use of Force Complaints**

No discussion of the control of police force would be complete without an examination of the legal precedence that determines liability for departments in excessive force claims. Under the legal framework, the definitive standards for the efficacy of use of force are split among non-deadly and deadly force. The legal framework for these two types of force was laid down by the Supreme Court in *Tennessee v. Garner* (1985) and *Graham v. Conner* (1989).

The definitive standard for police use of deadly force was legally established by the Supreme Court in the case of *Tennessee v. Garner* (1985). The court stipulated a “balancing test” where the state had to “balance the nature...of the intrusion on the individual’s Fourth Amendment’s interests against... the governmental interests alleged to justify the intrusion”(1985:8). This balancing test that the court promulgated takes into account the need for effective law enforcement and the need and value which the state places on freedom and individual liberties. According to the Court, the government can seize (in this case seize the life) an individual only when the officer suspects that the individual’s actions present immediate danger to the officer or others in close proximity. While some have argued over the point of what constitutes immediate danger, the Court has found that the individual must both possess a weapon and show signs that he/she is
willing to use it. The mere possession of a weapon with no perceived intent to cause
injury has been ruled to not meet the constitutional standard for use of deadly force (*York

Kaune and Tischler (1989) in their analysis of the *Garner* decision, claim that the
use of deadly force is not only justified by immediate threats to the officer or citizens but
can also be inferred by the suspect’s past dangerousness. Kappeler and Kaune (1993) in
looking at past dangerousness found that deadly force may be justified when the police
believe that a suspect has committed a crime using or is threatening to cause great
physical harm. While the issue is not presently clear, such crimes as murder, bank
robbery and armed robbery are believed to be violent enough to justify use of deadly
force.

The *Garner* decision clarified many important issues surrounding the proper use
of the deadly force. However the justification for the use of non-lethal force remained
unclear until May of 1989, when the Supreme Court announced a new standard for
determining liability for less than lethal claims of excessive force. In *Graham  v. Conner*
(1989) the Court held that the determination of whether a law enforcement officer used
excessive force in the course of an arrest, traffic stop or some other seizure was based on
the Fourth Amendment’s objective reasonableness standard. The Court mandated that the
actions of officers involving questions of excessive force should be “judged from the
perspective of a reasonable officer coping with a tense, fast-evolving situation.” In it’s
decision the Court declared that the justification of force to be reasonable, requires a
careful balancing of the nature and quality of the official intrusion into the complainant’s
life against the countervailing government interest at stake. Thus in any case concerning
the propriety of force, the court must properly review all the facts and circumstances of
the case, the threat imposed to the safety of the officer or others, and the level of
resistance that the officer encountered.

The court decided that the “reasonableness” of a specific officer’s conduct “is not
capable of precise definition or mechanical application” (Graham, 1989:1871). Thus,
this objective reasonableness standard could only be defined and judged from the
perspective of a reasonable officer at the scene, responding to rapidly developing
situations rather than a retrospective view from an impartial observer. The court stated
that: “As in other Fourth Amendment contexts, however, the “reasonableness” inquiry in
an excessive force case in an objective one: The question is whether the officer’s actions
are “objectively reasonable” in light of the facts and circumstances confronting them,
without regard to their underlying intent and motivation...” (Graham v Conner,
1989:1971-1872). In wording their decision in this way, the Court reversed the
Fourteenth Amendment’s standard of “shocking the conscience” and that was enumerated
by Glick v. Johnson (1973), and clarified the ambiguity that was created by previous
decisions.

Kappeler and Kaune (1993) note that prior to Graham, there was considerable
confusion over which constitutional right was violated in claims of police use of
excessive force. They stated that most courts applied a test under the Fourteenth
Amendment’s due process guarantee when determining legal liability. Thus if force was
applied in a good faith effort to maintain and restore order and was not implemented
either maliciously or sadistically, then no criminal or civil liability was implied or could
exist. In contrast, other courts followed either the Fourth Amendment’s prohibition
against unreasonable searches and seizures or the Eighth amendment’s protection against cruel and unusual punishment.

**Conclusion**

The use of force, its prevalence, and its definition are problems that have evaded researchers and practitioners for the better half of two centuries. While we may never be able to tap the prevalence of police use of force incidents, we may be able to analyze the multitude of factors related to its use. With the affirmation of *Graham v Conner* (1989) by the Supreme Court, we currently have a legal standard dictating that police use of force at any level can be justified so long as the officer is acting like other reasonable officers given the same set of circumstances. However, the question still remains, what is reasonable?

While previous studies have been useful in defining the situational correlates of police force, no study to date has set out to define an occupational standard where police force is both justified and accepted. If research is to get beyond this impasse, it makes sense to do like other professional organizations such as the American Medical Association and the American Bar Association have done by having the profession define its own set of ethical behavior (Klockars, 1995).

Prior research has assessed the police’s ability to evaluate their own work. Toch et al. (1975) found that police officers and specifically patrol officers, are able to evaluate what good police work is and when force is excessive. This research endeavor will complete two primary tasks. First it will identify the individual and situational correlates of forceful police-citizen encounters. And second, it will go beyond our current state of knowledge and identify the reasonable officer’s perception of appropriate intervention
strategies for handling potentially volatile police-citizen encounters. Specifically officers will be asked to use a use of force continuum when deciding when and what type of force is appropriate in a series of vignettes. With such a benchmark, situationally specific responses to suspect actions will serve as a guide for officers across the country to rate their present behavior as well as serve as a guide for the courts to assess criminal and civil responsibility. With such a guide in place, training officers and police administrators may be able to tailor use of force classes and departmental polices to reflect the occupational (or reasonable officer) standard thereby protecting themselves from potential criminal or civil litigation.

The next section will review several of the major research endeavors of which the majority of our knowledge of police force is based on. Following this chapter, I will introduce the survey instrument and the methodological techniques used to complete this study. Chapters 4 and 5 will introduce the individual and situational correlates the extant literature has said to effect officers decisions to use force and test these studies findings against what the officers in this sample believe to be the true discriminators of when and how much force should be appropriately applied. Chapter 6 will take this effort one step further and provide a series of models designed to exemplify an occupational standard by which officers and the courts can compare the coercive behavior with that which the occupation states fits the “reasonable officer” standard set forth in *Graham v. Conner*
Chapter 2
Contributing Factors to the Application of Force

Introduction

Research on police use of force has during the past 20 years increased in quality and become more methodologically sound. Prior to Reiss’ study in 1969, little information had ever been captured in a systematic way denoting the intricacies of police behavior. There were few studies examining the amount of force police distributed in the course of their daily activities aside from studies that examined the general tasks of typical urban policemen (Banton, 1964; Wilson, 1968). It was not until the latter part of the 1970s that serious attention was paid to defining and differentiating the different roles of the police, including the use of force.

Many of the early studies cited here are not systematic empirical investigations of force. The decision to include them is based on the fact that these studies not only included the implementation of force in a larger context, but established the groundwork for the later studies that examine the correlates of police-citizen encounters that involved force. Thus, this section will include an examination of research said to effect officers’ decisions to invoke the formal processes of law up to that of deadly force. While I will not deal with the issue of deadly force directly, it is important to understand that the implementation of deadly force occurs most often as an outgrowth of force situations that have spiraled out of control (Fyfe, 1995).

Based on the findings of many of these early studies we now have thumbnail sketches as to when and under what circumstances the police use force still, there remains quite a bit left to be done. In this and the following five chapters, I will review the extant
literature focusing on the factors said to influence the utilization of force by the police against citizens.

**Prior Literature on Police Use of Force**

While there is a substantial amount of literature on police use of deadly force, much less attention has been given to less-than-lethal force. In the past some have examined lower levels of force by performing a contextual analysis of police-citizen interactions (Reiss, 1969; Friedrich, 1978; Sykes and Brent, 1980). Others have analyzed official “use of force” reports completed by the arresting officers (Garner, 1995; Croft, 1985; Worden, 1995). And still, others have relied upon citizen reports to the authorities claiming that the police used excessive force (Chevigny, 1969). Regardless of the research strategy employed, one constant finding is that police use of force is uncommon and it’s improper use is exceedingly rare (Worden, 1995; Garner, 1995; Friedrich, 1977; Reiss, 1969; Fyfe, 1995, Klockars, 1995).

In spite of the rarity in which these events occur, scholarly efforts have been able to determine that police force and its intensity is commonly affected by the context in which the police and citizens meet. Thus to better understand officer definitions of appropriate police force, it is necessary to explore the impact of theoretically relevant individual, situational and community factors (Friedrich, 1980; Sherman, 1980). Models explaining the use of force and the possible escalation of force, must include these variables.

For example, previous research has found that a citizen’s or officer’s race, social class, age, physical characteristics, gender, mental condition, and demeanor may affect the ways in which force is used. Similarly situational factors may also affect an officer
decision to use force. Some have found that such factors as the time of day, the community characteristics in which the encounter takes place, the seriousness of the offense and actions taken by others at the scene may also contribute to the officer using more or less force.

**Application and Major Studies**

Conceptualizing the factors that the previous research has said affects police force in this manner aids this research effort and others following by giving the body of literature a sense of direction and organization. However before examining the correlates of less-than-lethal use of force, a brief review of the major research endeavors that have led to this body of knowledge would be helpful. Illustrated in Table 2.1, is a list of the major studies that have been conducted on the correlates of police force, the year and city that they took place in and the type of analysis that each of the authors employed.

**Westley Study (1953)**

One of the first social science efforts by an academic to look at the police as an organization was conducted by William Westley during 1953 in Gary, Indiana. In his study, Westley identified the importance of police occupational socialization as a significant factor in explaining police behavior. He found that the older and more experienced officers informally taught new cadets how to do the job regardless of their formal education in the academy. In this socialization process, new officers soon learn that to be effective, they must take control of the situations in which they intercede, at all cost.
Table 2.1
Major Studies on the Application of Police Force

<table>
<thead>
<tr>
<th>Author</th>
<th>Year</th>
<th>Location of Study</th>
<th>Methodological Type</th>
<th>Unit of Observation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Westley</td>
<td>1953</td>
<td>Gary, Indiana</td>
<td>Observational</td>
<td>Participant Observer</td>
</tr>
<tr>
<td>Toch</td>
<td>1968</td>
<td>Oakland, California</td>
<td>Observational</td>
<td>Police-Citizen Encounter</td>
</tr>
<tr>
<td>Chevigny</td>
<td>1966-67</td>
<td>New York City</td>
<td>Official Records</td>
<td>Citizen Complaints</td>
</tr>
<tr>
<td>Reiss</td>
<td>1966</td>
<td>DC, Boston, Chicago</td>
<td>Observational</td>
<td>Police-Citizen Encounter</td>
</tr>
<tr>
<td>Friedrich</td>
<td>1966 (78)</td>
<td>DC, Boston, Chicago</td>
<td>Observational</td>
<td>Police-Citizen Encounter</td>
</tr>
<tr>
<td>Brent and Sykes</td>
<td>1980</td>
<td>Unknown Large, American City</td>
<td>Observational</td>
<td>Police-Citizen Encounter</td>
</tr>
<tr>
<td>Toch</td>
<td>1969</td>
<td>Oakland, California</td>
<td>Observational</td>
<td>Police-Citizen Encounter</td>
</tr>
<tr>
<td>Chevigny</td>
<td>1969</td>
<td>New York City</td>
<td>Official Records</td>
<td>Citizen Complaints</td>
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</tr>
<tr>
<td>Brent and Sykes</td>
<td>1980</td>
<td>Unknown Large, American City</td>
<td>Observational</td>
<td>Police-Citizen Encounter</td>
</tr>
<tr>
<td>Croft</td>
<td>1984-85</td>
<td>Rochester, Syracuse</td>
<td>Official Records</td>
<td>Use of Force Reports</td>
</tr>
<tr>
<td>Worden</td>
<td>1977</td>
<td>Rochester, St Louis, Tampa-St. Petersburg</td>
<td>Official Records</td>
<td>Police-Citizen Encounter</td>
</tr>
</tbody>
</table>

As a supplement to his primary finding, Westley (1953) found that the police place a tremendous amount of importance on citizens showing respect for police officer authority. This was particularly true of minority or lower class citizens. If a citizen failed to show respect, or challenged the officers’ authority, officers believe they are justified in punishing the citizen by using physical force. On the basis of these observations he concluded that norms developed in the occupational group, particularly those requiring secrecy, permitted the use of force to override the directives superiors and the law.

**Toch and Chevigny’s Studies of Police Violence (1969)**

Toch in the late 1960’s extensively studied violence prone police-citizen interactions in Oakland, California. Taking into account the situational antecedents of each encounter along with supplemental interviews from a group of officers and group of citizens who were assaulted, he concluded that most violent police-citizen interactions were a manifestation of citizens disrespect for officer authority. Tracking the sequential stages of each encounter he found that one-half of all violent police-citizen encounters resulted from a citizen’s reaction to a verbal command from an officer. The citizen, often
failing to cooperate or showing his displeasure. had the original threat upgraded to a command, and then into physical violence.

In a similar study, Chevigny (1969) examined citizens complaints of police use of excessive force referred to the New York Civil Liberties union between 1966 and 1967. Finding similar results as Westley (1953) and Toch (1969), he concluded that of the authenticated complaints, 71 percent resulted from the citizens’ defiance of police authority or behavior which the police took to be defiant. In the majority of the cases (61 percent), citizen defiance was in the form of speech rather than acts.

**Reiss Dataset (1969)**

One of the best known and most utilized data sets in this genera was collected by Albert Reiss in 1966. Since this dataset and Friedrich’s reanalysis are the basis for the present study, I am going to go describe the study’s findings and methodology more thoroughly. Reiss (1969) began collecting the first large scale observational study of the police, through a grant from the Presidents Commission on Law Enforcement and the Administration of Justice. Starting with the general proposition that the police are the major representatives of the legal system and possess a virtual monopoly on the legitimate use of force, Reiss focused his attention on the interplay between officers and citizens within the community during the summer of 1966 in Washington DC, Chicago, and Boston.

In this study, trained observers accompanied law enforcement officers on sampled shifts in selected high crime neighborhoods. The observers had two basic tasks. The first was to capture the details of each observed encounter between the police and citizens. Observers collected data on the number of encounters, their characteristics, behavior of
the involved citizens, reasons for the encounters, and both the formal and informal actions taken by the officers. The second task was to capture in narrative form general observations about the shift, conversations and attitudes of the observed officers, attitudes toward their department, and other work experiences.

Although the data produced by Reiss set the standard for qualitative policing research for the next twenty years, they did not capture information on the number of arrests made during the encounters nor did they specifically capture detailed information on police use of force in the course of arrests and non-arrests. This data was left for Robert Friedrich to reassemble in his reanalysis of the Reiss data.  

_Friedrich Reanalysis of the Reiss’ Data (1977)_

In 1977 Robert Friedrich examined the data gathered by Reiss. However since the original data set was structured so that the “encounter” would be the unit of analysis, individual actions of both citizens and officers were lost. To alleviate this problem and shift the focus back to individual behaviors, Friedrich was forced to restructure the data so that each encounter could represent from 1 to 10 encounters between the police and the public depending upon the number of officers and citizens present.

Friedrich determined that of the 1,565 police-citizen encounters, only 80 involved any evidence of force used by the police. Focusing on individual, organizational, and situational factors, he found that individual and organizational factors previously factors thought to effect police use of force, were not significant. However, he did find that such

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3 Since Reiss did not collect data on the number of arrest or specifically include a field to determine if force was used during these encounter, Friedrich (1977) reassembled the original coding sheets and matched them with official records and the data matrix. The exact process in which the task was completed is not clear, although the author implies that many cases may have been lost in the transformation processes.
situational characteristics of encounters as race, sex, social class, and demeanor of the suspect’s were the strongest of the three areas in predicting police use of force.

**Sykes and Brent (1980)**

Sykes and Brent (1980) used four trained observers to analyze sequences of interactions between citizens and officers in 1,622 police-civilian encounters. Coding the data in such a way that inclusion only occurred if there were 20 or more interactions between the officer and the citizen, a total of 95 separate encounters were analyzed in the final database.

During each encounter, each utterance between the officer and the citizen was recorded in sequence, as they related to such dimensions as: situational structuring, the command issuance, and threats of coercion. This ordering permitted the researchers to analyze the sequence of responses between the concerned parties. They found that similar to other studies, force is rarely called for or needed. The most common method police use to get someone to behave in a certain way is to repeat the command over again. When oral repetition is ineffective, officers gradually escalate their level of force until the disturbance to their goal is overcome.

**Croft’s Police Use of Force Study (1985)**

Taking a different methodological approach, Croft (1985) examined 2,397 incidents of physical force by the police. These data were supplemented with data from 495 encounters where force was not implemented. The analysis took place in Rochester, New York and used “official use of force” and “firearm discharge” reports as mandated by the department between 1973 and 1979. With these data sources, Croft was able to
record information on the background characteristics of opponents, situational factors of
the incident, interplay between officer and citizens, and the outcome of such events.

Consistent with other studies Croft (1985) noted that police use of force is
infrequent, occurring in approximately five percent of arrests and in less than one percent
of all police citizen encounters. In those cases where force was used, officers were more
likely to physically restrain the citizen than to beat or strike a suspect with a fist or impact
instrument Additionally she found that in the majority of the cases, neither the officer or
citizen was injured.

**Worden and the Police Service Study (1995)**

In a similar endeavor, Worden (1995) analyzed data from the Police Services
Study collected in 60 neighborhoods in the vicinities of St. Louis, Missouri; Rochester,
NY, and Tampa Bay, Florida. This study data was collected in the summer of 1977,
when trained observers rode and walked along with patrol officers on 900 shifts in 60
neighborhoods. The participant observers recorded 5,688 police-citizen encounters in the
form of field notes, which were later transferred to a standardized data code sheet.

Unlike the Reiss (1969) data, there was considerable variation in the sizes of
departments studied as well as the municipalities served. Neighborhoods were selected in
such a way as to insure racial and financial variability. In this study, Worden (1995)
found that police use of force was a rare event with improper use comprising only one
half of one percent of the studied encounters.

**Garner’s Use of Force By and Against the Police (1995)**

One of the latest studies to be released was a work examining the use of force by
and against the police in Phoenix, Arizona. As part of a grant from the National Institute
of Justice, Garner (1995) initiated a study describing the amount of force used in arrest situations and the characteristics of the encounter that involved officers and citizens. Similar to that of Croft (1985), Garner (1995) used the standardized use of force incident reports completed by officers of the Phoenix Police Department following adult custody arrests. The primary data collection instrument was supplemented with interviews from police officers and jail house subjects to validate police and suspect perceptions of a sampled number of encounters.

The data was collected during a two week period beginning June 13, 1994, resulting in 1,585 arrests. In 349 (22 percent) of the arrests, the police used some form of physical force. On the flip side, Garner (1995) found that physical force was used by suspects against police officers in 14.4 percent of all recorded incidents.

**Summary of Benchmark Use of Force Studies**

This brief overview of the major research endeavors looking at police use of force has demonstrated the lack of knowledge that we currently have concerning when force is applied and what levels of force officers generally regard as appropriate. The extant literature, although failing to bring the contextual issue to light, has delineated a number of domains that are pertinent to this effort. In Chapters 4 and 5, these correlates will be presented and their relationships to situations where force is used will be explained. Following this, the suppositions that these studies have found regarding the situations where force is most likely to be applied will be empirically tested to see if these correlates also determine the level of force officers believe should be applied in a given police-citizen encounter. The method and data used in this study to assess these indicators of the level of force deemed appropriate are presented in the next chapter.
Chapter 3  
Research Design and Analytic Techniques

Introduction

The last two chapters have outlined the problem and reviewed the major research efforts completed that comprise our current state of knowledge. These prior research efforts have been able to determine with some degree of certainty when and if force will be utilized by officers. Still, there remains little consensus about what constitutes the appropriate amount of force in any given situation (Garner, 1995:146; Klockars, 1995).

Given the availability of knowledge concerning the correlates of forceful behavior, the problem of modeling all of these factors to predict or define what constitutes officers’ perceptions of the level of appropriate force to be applied in a given situation is a complicated issue and one that has not been addressed. Research on non-lethal force has employed a variety of methodological approaches including observational studies, use of force incident reports, citizen complaints and many others. Each of these approaches has its own merit however, none have been able to implement the standard set forth in *Graham v. Conner*.

This standard simply asks an officer’s peers to evaluate the utilization of force from their own perception of the elements known and unknown to the officer. Since the judging officer can not actually be at the scene when a forceful event occurs, we often ask individual officers or expert witnesses to make such determinations based on their perception of an event. Using a factorial model, the present study will apply the same logic. Officers from a variety of departments and locations, will be asked how many warnings they would issue before resorting to physical force as well as the appropriate
and highest levels of force that should be applied in a given situation. The vignettes within the study will be comprised of a randomly drawn set of theoretically relevant individual, situational, and community variables.

This examination of the contours of police use of physical force will provide the criminal justice community with a wealth of baseline data concerning the efficacy of forceful events. This approach will permit an examination of the types of opponents, their behavior, the physical settings in which the incident occurred and the characteristics of the community that are often associated with situations where the police use force. This chapter also discusses the data and methodology to be used to examine officers’ definition of the appropriate level of force.

In this regard, the chapter begins with a discussion of the sample to be drawn and the procedure for collecting the data. To determine the independent effects individual, situational, and community factors have on the determination of the justification of force, these factors will be combined and formed into vignettes. The sample and particular method of constructing vignettes is described next. An explanation of how each variable will be operationalized, and justifications their inclusion in the vignette follow. Finally, the scale or continuum to be used as the dependent variable will be introduced and explained.

The data to test the study hypotheses was collected using an eight-page, self-administered survey completed by 800 police officers attending a series of training modules on use of force, weapons retention and defensive tactics at the Ohio Peace Officers Training Academy (OPOTA). The Ohio Police Officer Training Academy, located just outside of Columbus, Ohio, was founded and incorporated within the Ohio
Attorney General’s Office in 1976. It’s mission is to serve as the State’s primary police training academy for basic, advanced and technological aspects for the state’s law enforcement community. The academy officers over 400 classes a year on subjects such as use of force, defensive tactics, patrol, administrative services, crime scene investigation, marijuana identification, finger analysis and special weapons and tactics. With eight instructors, OPOTA admits a new class of 12-60 officers each week for in-house training. During the past year, OPOTA estimates that over 10,000 officers have participated in primary or in-service training at the academy or at one of the 1,050 law enforcement agencies within the state.

The Sample

The choice to use officers from the state of Ohio is based on two considerations. The first is a matter of convenience and the second lies in the similarity of the population of the state to the United States as a whole (Tuchfarber, 1988:15). This view was bolstered and applied to the Ohio’s law enforcement community by Faulkner (1991), who found little difference in the opinions of the citizens and the law enforcement community of Ohio relative to those of any other state concerning issues surrounding the efficacy of police force.4

However, this sample is not perfect. In these data there is scant representation of officers from the larger cities in Ohio: Cincinnati, Akron, Dayton, Cleveland and Toledo. Hence there may be a built-in bias toward the representation of small to medium-sized police departments. However, given that roughly 60 percent of the 15,000 municipal and local police departments across America employ ten or fewer officers and only 10
percent employ 135 or more, we may be avoiding some of the “big city bias” that appears to dominate our notion of contemporary policing (Walker, 1992, Langworthy and Travis, 1994).

Although there may be an indication of bias in this sample, there are no visible indications that the chosen sample is not representative of the majority of police officers in Ohio or across the country. Respondents included in this sample either voluntarily choose to attend these classes or were required by their own departments to receive a set number of in-service training hours. For this reason, there are indications that officers in this sample may be more informed than those who did not request additional training. Furthermore, subsequent analysis of in-house training module evaluations has revealed that the potential respondents in this sample are not rookies, with an average length of service of a little over 8 years. Thus an argument can be made that these respondents are trained law enforcement professionals.

The sample size of 800 was chosen based on two considerations. The first consideration centers upon the fact that an 80 percent sample of 800 will present a sampling error of plus or minus 4.5 percent for any particular item. While no sample is likely to produce respondents that are precisely the same as those in the population, there is always some concern that the sample is not perfectly representative of the entire sample. If such differences between the sample and population data results purely by

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4 Faulkner (1991) has been collecting data on a similar nature across the country since 1991. Subsequent analysis based on 8,000 cases of his data reveal little occupational, state or regional variation.

5 There is no mandatory training module for peace officers within the state with the exception that officer’s must qualify with their firearms annually.

6 Sampling error based on conservative estimated of 50 percent binomial distribution. This figure must be regarded only as a general guide since this analysis is not based on the analysis of any single data element.
chance, this is known as sampling error. Smaller samples are more likely to be different from the larger ones, so smaller samples have larger sampling errors. While the consideration of sampling error is an important one, more important is that a full sample of between 720 to 800 respondents will provide enough statistical power to analyze the influence of the variables included in each vignette and the respondent demographics of the sampled officers.\textsuperscript{7} If a smaller sample was chosen, it is likely that this study would be under-powered, thereby decreasing the likelihood of a statistically significant result even when a large effect may be observed (Cohen, 1988:4).

**Choosing a Self-Administered Survey**

Generally there are three ways in which the survey data could be collected. These include personal face-to-face interviews, telephone surveys and self-administered surveys (Dillman, 1983; Fowler, 1988). According to Fowler (1988), personal interviews are said to be the best sampling technique because they allow researchers to answer respondent questions, probe for adequate responses and build rapport with the subjects. While the personal interviews may provide some benefit to the study at hand, they are more likely to generate socially desirable responses than self-administered questionnaires. Dillman (1983) states there are two reasons for this effect. One is that a person’s honest answer may run counter to what the interviewer may believe is socially desirable. The second concern is the disclosure of sensitive information (which this study concerns) to co-workers nearby who may be listening. Given that interviewer bias may be a problem in studies utilizing personal interviews, it would not necessarily preclude this type of methodology from this study since it is being administered by a team of

\textsuperscript{7} For a completed explanation of the statistical power of a test see Cohen (1988)
“experts” at OPOTA who have no contact with the administration or others in the respondents’ departments. The simple truth is that this methodology is not cost effective given the variety of geographic locales, time and expense that would be needed to build the necessary trust and confidence of the subjects, when the respondents may believe that their answers could be held against them.

Another sampling technique that was considered was a telephone survey of officers. While telephone surveys are usually associated with low costs, and a high response rate, it is unlikely that officers would be as open as necessary to a stranger that acquired his/her phone number from a department official. Telephone surveys may introduce bias since those willing to participate may or may not have had a claim of excessive force levied against him/her. Additionally, it is doubtful that an officer would be able to present informed responses to the vignettes, that while compact, are complex and full of context sensitive information.

The third type of survey method considered is a self administered survey. Typically when we think of self-administered surveys one thinks of mail surveys. Self administered surveys are capable of presenting questions requiring visual aides and are especially good at asking long and complicated questions. Such surveys (particular mail surveys) allow the researchers to effectively target a large number of people with minimal staff costs. However mail surveys given to a large number of people must be given to all respondents simultaneously to avoid response bias within a department or class. Sudman and Bradburn (1974) claim that self-administered surveys distributed to a group of individuals at one time in a common location are very effective in gaining honest answers which may embarrass respondents to sensitive questions. They claim that
“If the topic is threatening, more complete reporting may be obtained from self-administered surveys rather than personal interviews…” (Sudman and Bradburn, 1974:66).

The intrinsic appeal of this type of self-administered survey lies in the fact that projects that usually take weeks to complete by mail or telephone can be completed within hours. The administration of these types of surveys prohibits exchanges between respondents who arrive early and late. Further, the privacy of the response situation, the minimization of the possibility of social desirability responses coupled with quick response or turnaround time make this type of survey an excellent choice for this project. Additionally, it is thought that a self-administered survey, given in a common location, at one time, should be able to produce higher response rates than could otherwise be obtained.

It was decided that a combination of having a personal interviewer present is who is available to explain to the respondents the need for this research, is capable of answering questions and making sure that questions were not misinterpreted, all the while minimizing the time and cost involved, proved to be the best solution. By running the survey during a training course by a team of recognized experts in the field, I felt I would be able to ensure the trust and confidence of the respondents, prevent socially desirable answers, produce high response rates, and at the same time maintain the integrity needed for the analysis of this sensitive topic.

**Distribution of the Questionnaire**

As mentioned previously, officers included in this sampling frame are students in use of force or defensive tactics courses at OPOTA. Depending on the length and type of
class, respondents in this sample are in the first hours of each selected training module, given detailed instruction on the legal history of use of force complaints and are introduced to the concept of a continuum of force to be used by officer’s predicated upon individual responses. Participants are advised of the plethora of continuums in place around the country and also told that to date, there is and has been no empirical validation of any such continuum by anyone except that of police trainers. Building upon the precepts laid down by *Graham*, the academy instructors tell the respondents that that this survey will be one of the first such studies to operationalize the “objective reasonableness” standard set forth by *Graham v. Conner*. Thus officers are encouraged to participate since it is their opinions that count and may someday help shape the standard that officers in the future may be held to.

Following the discussion on why officers should participate, instructors at the academy visually each of eight categories of officer responses, that are typically contained in most force continuums. These categories represent the range of levels of actual physical force. Respondents then validate their understanding through a variety of role playing exercises. Once the instructor is satisfied that the officers understand the possible defensive tactics available in the survey, the instructor introduces the survey, reiterates its purpose and instructs officers that all responses will be kept in complete confidence.

The instructors inform students that this survey is a perceptual piece. That officers are to respond in a way that best fits their personal belief regarding the appropriate amount of force to be applied to each situation. They are told that while their

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8 At this stage, officers are introduced to the concept of a continuum of force but are not shown a complete model
own departmental policies are important, even more important is their opinion as to the perceived efficacy of their own action. The respondents are informed that each survey is different consisting of a randomly drawn set of elements. If someone chooses not to participate, the person is welcome to leave the room and return in approximately 15 minutes. Thus far only 16 officers or 2 percent of the 800 officers encouraged to complete the survey have refused.

**Study Data**

In this study several types of data will be used in these analyses. These data will come from one of four sections in the the survey. These sections include: officer responses to vignettes, officer opinions as to the seriousness of their or an opponent’s action, officer opinions concerning the gravity of various offenses and survey data concerning officer perceptions of their department and community.

**Independent Variables**

The independent variables to be analyzed in this project are numerous. In the original design of the survey instrument, it was proposed that officers evaluate the vignettes as an independent observer of a police-citizen encounter. Thus, officers were asked to evaluate how many warnings an officer should issue before resorting to physical force, the appropriate force a situation called for, as well as the highest amount of force that could be justified. To accomplish this task, all independent variables including the demographics of a fictitious officer were included in each vignette. However, after field testing 70 questionnaires with the Lafayette, Indiana Police Department during March of 1996, it became evident that the number of variables officers were being asked to

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where suspect actions are correlated to officer behavior.
consider was too cumbersome. Subsequent discussions with the officers completing the field test of the questionnaire revealed that they would have found it easier to respond to the vignette if they were the subject of inquiry. For this reason, the survey and the subsequent instructions were reworked, removing the demographics of the officer from each vignette, and asking officers evaluate the situation as if they were the responding officer.

Individual Level Variables

Detailed below are the type of demographic variables pertaining to the opponent that were randomly drawn and selected for inclusion in the vignettes. These variables include the: size, race, age, and gender of the police opponent.

Size of Opponent.

The size of the opponent is an important consideration for officers in their list of possible choices in how to deal with an individual. Cruse and Rubin (1972) found police officers are more likely to report a higher degree of stress and mistrust in dealing with medium to large-sized opponents. The implication, of the “stress factor” states that officers may be more willing to use force early to contain a situation and prevent it from getting out of hand. In order to measure and model opponent size, this variable was coded a 1 if the opponent is small, 2 if they are medium-sized, and 3 if they are perceived to be large.

Race of Opponent

The race of the opponent is included as an indicator of an opponent’s personal attributes that may influence not only the type of force an officer uses, but how quickly he/she resorts to its use. The extant literature has had a difficult time estimating the
effect of race in predicting either when or how much force will be applied because in many studies race and class are often intertwined. While several studies found that blacks were both more likely to be stopped and interrogated by police officers, observational studies have consistently concluded that the effect of race on decisions to impose the criminal law or force is spurious, because minority suspects are more likely to be disrespectful to the police (Bogomolny, 1976:571; Ferdinand and Luchterhand, 1970:510; Pilivan and Briar 1964; Black, 1971:1103). While Friedrich (1977) found that the police are more cautious and neutral in dealing with disputes involving black suspects, Black (1979) claims that police officers use a more coercive approach to settle disputes involving blacks compared to whites. However, Reiss (1972:303) found that black suspects are victims of brutality at less than half the rate of white suspects.

In instances of deadly force, the picture is more clear. The literature seems to indicate that black suspects fall victim to police use of deadly force more than their arrest population and involvement in part I crimes would predict (Milton, et al., 1967; Fyfe, 1978, Sherman, 1980; Knoohuizen, Fahey and Palmer, 1972). Building on the prior stated author’s inconclusive findings on the role of race, the race of the opponent will be described in a series of dichotimously coded dummy variables. These variables (SUSPECT BLACK, SUSPECT WHITE, SUSPECT HISPANIC, SUSPECT ASIAN) will be coded a 1 if the suspect fits the variable title and 0 if they do not. In the following analyses, white suspects will serve as the control group.

**Age of Opponent**

The inclusion of the age of the opponent in the survey is intended to determine if there is a greater willingness or acceptance of the use of force by the police on younger
individuals. In order to operationalize this variable, the same coding scheme used by officers in their report writing was used. Since police officers responding to a scene generally do not know the exact age of all the suspects they encounter, they generally describe an opponent’s age in terms of three categories (early, mid and late) based on ten year increments. Based on the early findings of Faulkner (1991) stating that most officers believe that juvenile offenders constitute a different threat than adults, the first age category is designed to capture “teenagers” or those under the age of the majority. Each successive age category up to the age of 60 or above is measured by an officer’s perception that the opponent is in their early, mid or late category of decades 20 thru 50. While this coding scheme is not exact, it does capture information about a suspect’s age that appears to influence officer decisions to use force.

**Gender of Opponent**

Another personal attribute of a potential opponent to be analyzed is the gender of the suspect. The literature has found that police officers normally do not perceive women to be as aggressive as are opponent compared to males (Croft, 1985; Klinger, 1996). Thus the gender of the opponent will be included here as a dichotomous variable. The potential opponent will either be cast as a male (coded 1) or female (coded 0). No gender specific pronouns are used in the vignette.

**Demographics of Officers**

Although not included as a factor in each of the vignettes, we will also analyze a series of demographic factors of the officers responding to this survey. As mentioned earlier, officers were asked to view themselves as the responding officer to each structured event. Officer demographics were collected through a series of questions in
the survey. As noted, these variables were not part of the vignette itself. These factors include such variables as: years of service, years of formal education, amount of training, number of physical confrontations, age, gender, height and weight.

Years of Service, Education and Type of Training Received

One of the critical questions these variables seek to answer is if experience and training effect the amount of force that an officer believes to be appropriate. Early research into this area has suggested that these factors may influence the officer’s “working personality” and “world outlook” (Balch, 1972; Lefkowitz, 1975; Rokeach, 1971 and Adorno, 1950). To measure these factors multiple indicators have been included to tap these issues.

One of the factors that may comprise the officers working personality is their years of service. Early works by Croft (1985) and Friedrich (1977) revealed that both the most and least experienced officers were less likely to patrol and arrest aggressively. To capture this dimension, years of service will measured at the interval level based on actual years on the force. Another aspect of the officer’s working personality is the officer’s years of formal education. It is expected that higher educated officers will likely evaluate the need for forceful resolutions of disputes more carefully (Worden, 1995). Generally the literature has shown that better educated officers report having fewer instances of civilian complaints against brutality filed against them (Cohen and Chaiken, 1972; Cascio, 1977). This variable is measured at the interval level with officers reporting the total years of formal education.

Recognizing that this measure may not represent the full range of educational possibilities for police officers, additional measures were included to supplement formal
educational training. For instance, respondents were asked how many hours of training they received in defensive tactics during the past year. The number of hours of training they received in community policing during the past year was also collected. Respondents were also asked if they had ever received training in verbal judo. Finally, a measure was designed to tap an officer’s prior experience with physical confrontations. Here officers were asked to indicate how many physical confrontations they had been involved in where force was used in the past year.

**Officer Age, Sex, Height, Weight**

The personal characteristics of an officer responding to this survey are also included in the analysis. Although previous studies generally have failed to find a relationship between the physical attributes of an officer and their propensity to use force, many police trainers claim these to be some of the most important factors affecting an officer’s decision to impose physical coercion (White and Bloch, 1975; Hoobler and McQueen, 1973; Swanson and Hale, 1975; Faulkner, 1991). In order to test the suppositions of trainers, officer age, gender, height and weight were collected. The coding of these variables are as they are reported. Officer age is record as actual age, gender as a male (coded 1) and female (coded 0), height in inches and weight in pounds.

**Situational Level Variables**

Just as individual level traits are an important indicator of the justification or amount of police force used, so are situational correlates. In fact, the literature seems to point to situational correlates as the most important indicators of how disputes or police-citizen encounters are resolved (Friedrich, 1977; Sherman, 1980; Croft, 1985). Listed below are the correlates that the literature states may explain when and how much force
is applied. These variables include mobilization type, type of incident or call, time of day, number of both officers and citizens present, location type, suspects demeanor, indications of substance abuse by the opponent and level of suspect resistance.

Mobilization Type

The first situational level variable introduced in the vignette pertains to discovery of an incident. For instance, Reiss (1971) found that if an officer proactively initiates an encounter, citizens are more likely to be treated without antagonism, than if they respond to a call for service. Attempting to tap this proactive-reactive dimension, I have included a variable to address if the officer was called to a scene by a citizen complainant (reactive mobilization) or if he/she sees an event taking place (proactive mobilization) that merits his/her intervention. This variable mobilization is introduced and coded as a dichotomy. It is expected that if the officer is dispatched to a location (coded 0) he/she will have less information than if he/she sees an incident in progress (coded 1).

Type of Incident/Call

Another important situational level variable is the type of offense that an officer either sees or is dispatched to. Ten types of offenses have been included in the study vignettes. They are as follows: shoplifting, disorderly conduct, burglary, domestic violence, aggravated assault, robbery, rape, drive by shooting, arson and homicide. They have been coded from one to 10 in the order listed above.

While these categories do not represent in intricate detail the entire range of calls that police in America respond to, they do represent within broad classes the types of calls that the police generally see. The selection of these offenses was based on two primary considerations. First, I wanted to make sure that respondents understood the
type of offense they were being asked to evaluate. And second, it seemed imperative there be a range of types and levels of seriousness of the included offenses.

In order to derive the offenses to include in these analyses, an informal survey of 68 officers at OPOTA was administered in the early spring. Officers were asked to list and rank in order of seriousness the five offenses they felt most likely and least likely to involve force. Frequency counts of listed offenses and a mean ranking of the likelihood that force would be used was used to split offenses into three categories. These categories of offenses included those who were said to be least, moderately and most likely to involve force. From the first two categories (least and moderately) the top three responses were chosen. In the most likely category, the top four responses were selected.

**Time of Day**

The time of a police-citizen encounter is also an important variable that must be considered when evaluating how the police interact with citizens. For instance, Croft (1985) and Lundstrom and Mullan (1987) all found that forcible incidents occur throughout the day, but pickup around mid afternoon and peak from 10:00 p.m. through 5:00 a.m. Since the majority of calls for police service occur between the late evening and early morning hours, it may be that officers simply do not believe that they have enough time to deal individually with each potential opponent to bring about a peaceful non-forceful resolution. Therefore officers may be inclined to use their authority more often to conserve their time for other calls. Plus, if we consider that encounters that occur in the late evening and early morning hours may be more likely to involve alcohol or drugs, the time of day becomes a critical element. In order to measure the effect of time on police conduct, each 24 hour day period was split into eight, three hour categories.
The first category is 6:00 in the morning, followed by 9:00 in the morning through the eighth category, 3:00 in the morning to 6:00 A.M..

Number of Officers Present

The literature also suggests that a lone officer responding to a situation may be more cautious and less authoritarian than if other officers are present (Wilson, 1963; Banton, 1964). Others have found that a lone officer at a scene makes it more likely that he/she will rely on the formal law by making arrests and filing reports (Friedrich, 1977; Boydstun et al., 1977). While these studies tell us little about the determination of force, they do indicate that in situations where officers have no peer support, they may be less willing to engage in high risk behavior than when they have backup. For this reason, I included a variable in the vignettes to measure the number of officers that are on the scene when the respondent arrives. The variable officers present is measured at the ordinal level and is comprised of 4 categories. Officer present is scored a 1 if there are no other officers present, 2 if one additional officer is present, 3 if two to three other officers are present, and 4 if four or more officers are at the scene and may provide backup to the respondent.

Number of Citizens Present

Just as the literature states that the number of police officers at the scene influences how police officers respond to situations, so may the number of citizens at a scene affect how an individual officer responds and interacts with the public. Large numbers of people at an incident, especially those unsympathetic to the police cause, may threaten the police officer’s control of the situation and cause him/her to react more forcibly to regain his/her authority. When there was a crowd of ten or more, the
likelihood of improper force increased dramatically (Westley; 1970). Similarly, Croft (1985) found that when there are no citizen observers, the likelihood of force being used is significantly less than situations where citizen witnesses are present.

In order to measure the potential impact of the number of citizen observers at a police-citizen encounter, a variable citizens present was introduced into each vignette. This variable was coded into five categories. The first category includes situations when there are no citizen observers. The second, details those situations when there is a sole witness to the transgression. The third and forth represent those encounters when there are between two-three or four-five witnesses. And the fifth category represents those situations where there is a group of six or more individuals gathered at the scene when the officer arrives.

Location Type

The physical setting or social setting of a use of force incident is also an important element in the consideration of how police behave and interact with citizens. Perhaps one of the most fundamental distinctions here lies in the difference between public/private or police/citizen controlled places. One common suggestion in the literature is the notion that police-encounters that occur in private places or in places the police control are more volatile than those that occur in public places (Worden, 1995; Friedrich, 1977). However, the distinction between the different types of places often is confused as a situation evolves. For example, a melee between an officer and citizen can begin on the street and continue into the confines of a cruiser, station house or public or private dwelling. In order to capture the place of the encounter, it was conceptualized that the included scenarios must take place outdoors where others are capable of viewing
the incident. While struggling with the conceptual issues associated with ignoring private settings, I came to the conclusion that there must be at least some possibility that someone else may have seen the incident. The reasons for this are many, however paramount among these is the fact that without corroborating evidence, it is unlikely that a claim of abuse of force would go forward to the final stages of litigation. It is expected that situations occurring in or near private settings, out of view of a number of private citizens, are likely to be less volatile than those in the public eye.

For these reasons, I decided to blend the two paradigms together. In each vignette the officer is presented with a potentially violent situation that occurs in a public place. In all of the included cases, the public place will be in front of the door way of a: commercial office building (coded 1), an apartment complex (coded 2), a single family dwelling (coded 3) or a public housing facility (coded 4). By coding the data in this manner, I ensure that there is some possibility that the situation may be viewed by another member of the citizenry, while eliminating the need to define the differences between public and private places.

**Opponent Demeanor, Indications of Alcohol or Drug Use and Appearance**

Even though the vast majority of citizens that police interact with on a daily basis can be classified as cooperative, as many as eight observational studies have found “disrespectful” or “uncooperative” citizens to be arrested more often (Conner, 1991; Sherman, 1980; Piliavin and Briar, 1964; Black and Reiss, 1970; Black, 1971, Petersen, 1972; Lundman, 1974; Sykes, Fox and Clark, 1976; Friedrich, 1977, Lundman, Sykes and Clark, 1978). Even in Toch’s (1969) early study, it was realized that most police-citizen conflicts were a manifestation of a citizen’s disrespect for officers’ authority.
Finally Chevigny (1969) found of the authenticated use of force complaints, 71 percent arose out of citizen defiance of police authority. Thus citizen demeanor according to the extant literature is a crucial element in the officer’s decision concerning the use of force.

Measuring the concept of a citizen’s demeanor and/or responsiveness to an officer’s directives is no easy task. There are many elements that comprise how officers’ view suspects and their intent to comply with the officers. Generally variables must include both verbal and physical cues as to the opponent’s intentions. To capture this type of communication, three variables were introduced in the vignette to denote the physical appearance of the opponent (appearance), verbal and non-verbal response to the officers request (demeanor) and indications of alcohol or drug use that may precipitate irrational behavior (substance).

The coding of these three variables is described as follows. The physical appearance of the opponent is described as either being clean and neat (coded 0) or rumpled and messy (coded 1). The suspect’s demeanor toward the officers is described as: non-responsive (coded 1), calm and collective (coded 2), nervous and agitated (coded 3), belligerent and threatening (coded 4) or abusive and violent (coded 5). Similarly, indications of the opponents substance use or impairment is coded as: none (coded 0), alcohol (coded 1), marijuana (coded 2), cocaine (coded 3), or a mixture of both alcohol and drugs (coded 4).

**Social Economic Status of Community and Call Frequency of Area**

While sometimes overlooked, the social-economic status and the frequency in which police respond to calls within an area are important considerations. Demonstrating this effect, Kania and Mackey (1977) found strong indications that the explanation for
police violence lies in such community characteristics. While I am not going to measure all of the societal factors that Kania and Mackey (1977) included in their analysis, SES and call frequency of an area do serve to represent a visual picture of the area that officers work. The information relayed from first hand knowledge of a vicinity, either through experience or word of mouth, gives officers general knowledge of the people and places that they may be interfacing with.

While the literature is silent on the effect that this information has on officer’s propensity to use force, it is likely an officer may resort to force earlier in disorganized areas than others. In the following analyses, the social economic status of an area (SES) was denoted on a five point scale. A value of 1 was assigned to predominately lower class areas, 3 to middle class areas and 5 to upper class neighborhoods. The second and fourth values of SES represents mixed neighborhoods between lower to middle (coded 2) and middle to upper class (coded 4). Call frequency will be coded on a three part scale, with a value of 1 representing an area where calls for service are rare, a score of 2 denoting an average number of calls and a score of 3 representing areas where they is frequent police intervention.

**Type of Resistance**

The examination or prediction of whether or not an officer could or should have used force is no longer an adequate explanation given the type of encounters and the legal complexities that they face every day as a result of their action (Toch, 1969). Today, most contemporary police policies and training modules rely on “continuum of force” to

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9 Kania and Mackey (1977) proxies community characteristics as a composite indicator of ses. This indicator was measured on such factors as nutrition, reproduction, quality of life, safety, recreation, mobility and education.
describe the types and the escalation of force that may be applied in situations where the suspect is resisting the directives of police officers. The central theme in many force continuums is that the officer response should match (within a broad category) the level of resistance that the opponent is displaying. This resistance can include: no resistance at all, psychological intimidation, verbal noncompliance, passive resistance, defensive posturing, active aggression to the display and intent to use a lethal weapon (Garner et. al., 1995; Faulkner, 1991; O’Linn, 1992).

Before discussing how each level of resistance is operationalized, it is important to note that in each of the vignettes, we assume that the officer has arrived on the scene, revealed to the suspect that he is a police officer and has verbally ordered the suspect to comply with his/her directives at least once. If the suspect complied with the officer’s request, there would be no need to use force and in this case no analysis. So for the purpose of this study, it assumes that the opponent is resisting at some minimal level. Subsequent levels of resistance are framed in such a way that the officer is clear about dialogue between his/herself and the opponent. In the vignettes the levels of resistance are represented by the following nine clauses:

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20 Disorganization in this context represents an officer’s general perception of an area to be in transition, experiencing serious problems with crime and disorder.
1. the suspect is not attempting to harm you, resists by using the weight of their body.
2. the suspect does not try to strike or push you, but pulls away repeatedly when touched or grabbed.
3. the suspect pushes you away each time you step close enough to gain control.
4. the suspect and you end up in a push-pull match. You are not on the ground and the suspect has not attempted to grab your gun.
5. the suspect squares off, clenches his fist, or offers verbal threats and does not desist with your requests to do so.
6. the suspect starts resisting by punching and kicking. When you step back, the suspect does not pursue.
7. the suspect viciously attacks, backing you into a corner and attempts to choke, and gouge at your eyes.
8. the suspect grabs your firearm and is attempting to take it from you.
9. the suspect produces a weapon. The suspect is intent on injuring you and is close enough to do so unless you react immediately.

**Factorial Survey Design**

As with any research endeavor, one of the paramount problems facing researchers is how to specify the separate effects of the independent variables on the level of force (the dependent variable) that can be justified. The traditional way of deciphering the effects of one independent variable on the justification of force, would be to ask how much force each officer would apply, bivariately rotating in the values of one variable at a time. We could do this X number of times for each value the independent variable assumes. Though this process would be tiresome and most likely lose the attention of the respondent, it would be possible.

This process becomes even more tedious when additional independent variables are introduced into a model or in this case vignette. Here, the number of unique cases that would have to be generated in order to contain a full set of responses would be dependent upon the number of independent explanatory factors and the combination of values associated independent variable. In such a case, where we want to assess the importance of all of the possible independent variables across all values simultaneously,
the required sample size would increase to a level totally unmanageable to even the most skilled research or consulting firms. For example, if we wanted to assess the importance of race of the perpetrators, ranging in years from 18 to 41, who were suspected of committing one of 10 different offenses, either possessed a weapon or did not, and showed the responding officer one of 6 different levels of resistance, we would need 5,520 unique scenarios.

Fortunately, there is an alternative that eliminates both the problems of considering the contextual elements of a real-life situations and the need for exceedingly large samples. This approach, named the factorial survey method, consists of pooling all possible values for the included variables and drawing an unbiased sample of elements of each variable set and arranging them into a series of vignettes that depict real life situations. In the present study, suspect characteristics will be combined with a series of individual, situational and community variables to create a picture of a rapidly unfolding event that an officer is called to intervene in.

Given the complexity of real life situations and the rapidity in which these events occur, the factorial survey is the most appropriate method for determining the underlying structure of complex judgments, such as those relating to police use of force. With a sample size of 800, in which one vignette is rated by each respondent, the effect of intra-rater bias is eliminated. Thus, as will be discussed in the next section, the analysis of the vignettes and appropriate control variables can be analyzed using almost any statistical technique.

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11 Real life situations in this context refers to the number of variables or conditions that may explain why an individual responds in one way to a situation and another if the scenario or elements in the scenario change ever so slightly.
Analysis Methods

The decision to use one form of analysis over another in this research effort was not an easy one, since the distribution of the primary dependent variable is not interval or ratio. In a situation where the dependent variable is discrete consisting of a dichotomous response, the correct analytic technique would rely heavily on a logistic distribution. However, when the primary dependent variable is an ordered categorical variable consisting of more than two categories, there are three options open to researchers for analyzing the effects of the independent variables on the dependent. The first would be to ignore the ordering of the dependent variable and treat it as a series of dichotomies. The second would involve interpreting the dependent variable as if it were measured on a true ordinal scale representing a crude measurement of an underlying interval level scale. Third, researchers could treat the dependent variable as though it were measured on an interval or ratio level scale. (Menard, 1995).

If I chose to treat the variable as a series of dichotomies, then the most appropriate statistical technique would involve the use of either logistic regression or discriminant function (Menard, 1995, Klecka, 1980). However, if the dependent variable (appropriate force applied) is treated as if were a true ordinal level scale, then a cumulative logit or ordered probit model that lets us estimate the effect of independent variables only in it’s relative position would be used. The final solution and the one most often used is to treat the ordered dependent variable as an interval scale using ordinary least squared regression (Menard, 1995).

12 The use of cumulative ordered probit or multinomial logit analysis invokes the proportion odds assumption where the effect of each independent variable is compared with regard to all categories that have either higher or lower classifications than the specified category (Demaris, 1992; Menard, 1995; Hedeker, 1996). Problems with this approach will be discussed later.
Based on the contention that dichotomizing the dependent variable and running a series of logistic regression or discriminant function runs would not allow us predict across categories the level of force the officer felt was appropriate, binomial logistic regression and discriminant function was removed from consideration, since only the second and third options would allow me take advantage of the ordering of the underlying interval scale of the dependent variable. In the following section, I will explain the analytical properties of ordered probit, present known issues that may interfere with interpretation and compare the benefits of this technique to that of OLS regression.

In cases where the dependent variable consists of more than two categories, some have suggested that the most robust analytic strategy to pursue is a special case of the multinominal logit model named ordered probit. (Steinberg and Colla, 1994; Agresti, 1990; Aldrich and Nelson, 1984, Demaris, 1992). These models simply predict the likelihood of an observation being in one category of the dependent variable versus a series of reference categories, given a set of control or explanatory variables. In a continuous variable, the probit coefficient estimates that change in the log-odds of the dependent variable, holding constant the effects of other variables in the model. And, for ordinal and nominal exogenous variables the interpretation is simply the change in the log-odds of the dependent variable given a specific category of the explanatory variable, controlling for other variables in the model. However, these coefficients must be interpreted carefully since the predicted change in the dependent variable is not a linear function of the explanatory variables (Menard, 1995).\(^{13}\) For this reason, a more intuitive

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\(^{13}\) The slope of the curve depends of the values of the independent and control variables.
explanation is given by exponentiating the probit coefficient to produce an odds ratio. The ratios are then interpreted as how much the odds of an outcome change given a unit change in an explanatory variable.

While an ordered probit model appears to be a viable solution, it is not without problems. Aldrich and Nelson (1985) and Menard (19995) claim that ordered multinomial or probit estimates often produce predicted values of the dependent variable that lie out of the range of the dependent variable. This happens for three reasons. First, the formula under the proportional odds assumption assumes that changes in the dependent variable will be stochastic across all cross-category comparisons within the dependent variable. That is, the effect coefficient (and thus error terms) produced and simultaneously estimated during the program’s maximum likelihood iterations must be invariant across categories both higher and lower to the predicted value. If heteroskedasticity is apparent within an estimated model, then errant values are likely. The second cause of problems using models with a limited range dependent variable model, is that a series of extremely large or small values in one of the explanatory variables may distort the distribution and variability of the residuals which in turn will influence the model’s predictive power (Aldrich and Nelson 1984; Schroeder, Sjoquist and Stephan, 1986). Third, Greene (1992:538) states that since the both the ordered probit and logit models depend heavily on the cross-classification algorithm, the presence of non-empty cells may cause the estimation process to either breakdown or produce faulty estimates. This may be especially problematic if we consider the limitations of our sample and the belief that officers would be hard pressed to evaluate deadly force as a
viable alternative for a nuisance criminal suspect who only passively resists the officer’s directives.\textsuperscript{14}

Addressing the concern regarding the influence of influential cases on the model, I propose to limit the number of categories to that of one and a half times the number of categories of dependent variable (Aldrich and Nelson, 1985; Hanusheck and Jackson, 1977; Steinberg and Colla, 1994).\textsuperscript{15} To address concerns regarding the problems associated with the proportional odds assumption and the possibility of a number of empty cells, I propose running the model using both OLS regression and ordered probit. Running equivalent models to determine if substantive differences occur is a standard analytic technique especially when there is a concern regarding assumptions that the level of influence of the dependent variables will be the same across all categories of the dependent.\textsuperscript{16} Supporting this approach, DeMaris (1992:77) suggests that “as the number of ordered levels in a dependent variable increases to beyond four levels, it may be safe to use OLS regression instead of ordered logit regression. If the researcher is in doubt, he or she should use both techniques. If no substantive differences emerge, then OLS, would be an acceptable approach. If differences emerge, then the ordered logit approach should probably be followed.” This method will be used to analyze both the individual and situational correlates presented.

\textsuperscript{14} Sample biases alluded to in this section include that notion that the sample used for this analysis is comprised primarily of small to medium sized police departments in Ohio whose officer’s are over 90 percent white.

\textsuperscript{15} Although none of authors cited above recommend limiting the number of values to that contained within the dependent variables, they do state problems associated with ranges of scores that may skew the metric of the dependent variable thus, causing problems of interpretation.

\textsuperscript{16} Consider the situation where an officer responds to a call for service where the suspect appears to be high on drugs. Are we to assume that the officer would be equally likely to escalate his level of force from balance displace to joint manipulations than using his/her baton as a impact weapon to discharging his weapon. One would suppose the gravity of taking an individual life would be measured more thoroughly and completely.
**Dependent Variables**

Following the vignettes, each respondent was be asked three questions. The first ascertains how many verbal warnings an officer would be willing to issue before force is applied. The second, essentially asks the respondent what they feel is the appropriate police response if verbal warnings or gentle touch procedures are not effective in bringing about the desired response.\(^{17}\) The third question asks what is the highest level of force the officer would use in the situation presented. Responses to the first question are scored from 0 to 4 with the final category representing 4 or more warnings. Responses to the questions concerning the appropriate and highest level of force considered are scored from 1 to 8. The coding scheme for these two responses was adapted from Faulkner’s (1991) “Action-Response Use of Force Continuum” (1991).

In Faulkner’s original work, he proposed and validated a similar scale that included 10 aspects of responses that were open to officers.\(^{18}\) In adapting Faulkner’s Model to this work, excluded were two of the lower levels of his continuum (verbal commands, assistance from other officers) and one level (escort position) was merged into his classification of “balance displacement.” The reasons for removing these two and merging the third into another category were two-fold. First I wanted to clarify for the respondents that verbal warnings and other indicators of “non-physical” force were not available options to the respondents. When respondents read the questionnaire, and vignette, there is and should be no doubt in their mind that verbal instructions had been given and were ineffective. Second, since verbal warnings do not traditionally constitute

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\(^{17}\) Gentle touch measures include such actions as handshakes or slaps, or may even encompass the officer putting his/her arm around a potential suspect. These actions are all considered friendly gestures and as such are apparent to both the officer and suspect that no coercive force is being tendered.
calls of abuse of force by the police, I wanted to make sure that this research effort focused on that behavior that could commission a valid threat to an individual’s constitutional rights. Described below are the types of tactics that officers are trained to use that correspond to the perceived level of resistance of the potential opponent. Again, we assume that verbal warnings have not been effective and the suspect fails to refrain from some type of prohibited behavior.

The first or base level of force to be used against a non-compliant suspect is called balance displacement. Balance displacement consists of a series of maneuvers by officers to force suspects to move in a desired direction. The crux of these maneuvers is to get potential suspects off balance by forcing them to move their shoulders either in front of or behind their hips, and hence being able to directly control the suspect’s movements. Typically this is completed by a simple tug on the elbow or shoulder, forcing the suspect off balance, allowing the officer to assume a more strategic position. When these maneuvers are used correctly, the suspect will neither experience pain nor subsequent bruising of tissue.

The second level of the dependent variable encompasses those tactics designed to cause temporary pain but no secondary bruising. These consist of either joint manipulations or pressure point maneuvers. Joint manipulations in the field are typically referred to as “transport wrist or finger locks” or “goose neck come-a-longs.” Joint manipulations are designed using the theory of “hyper-flexion.” That is, taking a large

18 For a complete listing of Faulkner’s (1991) “Action-Response Use of Force Continuum” range of officer responses, see Figure 1.1.

19 Speaking in a strictly legal sense, verbal abuse and subsequent humiliation by the police may represent a valid threat to an individual’s constitutionally protected civil rights, however, a search of federal case law has yet to reveal a decision that was upheld in favor of a defendant when a suspect was either primary and secondary suspect in either felonies or misdemeanors and was verbally threatened by officer.
body joint (such as the wrist) and forcing the joint to move in its natural direction until resistance is met. Once resistance is attained, slight amounts of pressure can be applied in order to produce temporary pain forcing a suspect into compliance.

![Figure 3.1 Human Body Pressure Points](image)

Also contained within the second level are pressure point maneuvers. These tactics are designed to control low levels of passive or defensive resistance. Pressure point maneuvers involve an officer placing the tips of his fingers on a single specified nerve point and applying light gentle pressure. These points are typically located at nerve points throughout the body. Some of the most common pressure points include: infraorbital nerve (just below nostrils), suprascapular nerve (crease between neck and shoulder), median nerve (underside of forearm), femoral nerve (lower inner thigh), common peroneal nerve (lower rear thigh), tibial nerve (back of calf) and others.

The third level of the dependent variable includes those techniques where a baton is used for leverage in order to bring the suspect to a submissive position. Typically these type of tactics involve trapping a suspect’s arm behind his back and impelling them
to move in a specified manner. Baton techniques, as they are used here, do not include those situations where the baton is used as an impact weapon. Typically there are not side effects to the use of a baton as a leverage device with the exception of temporary discomfort if the suspect continues to resist following the officer’s directions. While this type of technique is similar in function to the previous two, it is considered a higher level than either balance displacement or joint manipulations because the officer has in hand and is using an impact weapon.

The fourth level of the dependent variable encompasses those techniques that may cause temporary, but significant pain, muscle cramps and slight bruising. These techniques are taught to be used when a suspect’s resistance level exceeds passive resistance but does not represent a real threat to the safety of the officer. In this type of situation, officers are taught to strike the suspects’ major motor points or muscle masses with an extended knuckle in a clenched fist. This technique is commonly known as “frogging” a suspect. Common side effects of this technique include the loss of feeling in an appendage, local pain, muscle cramps, minor bruising and possible nausea.

The fifth level involves the use of less than lethal technological tools to resolve situations that previously would have resulted in a violent physical confrontation between the officer and suspect. Devices covered within this level include the use of pepper spray, mace, tear gas agents, or electrical devices such as stun guns. These devices are designed to induce excruciating temporary pain in the resistor while leaving little permanent trace of any such encounter.

20 For a more detailed diagram and listing of the human body’s pressure points see Figure 3.1.
The sixth level of officer responses in this continuum is comprised of techniques that resemble an all out street brawl. In the category labeled “empty hand striking, punching and kicking,” suspects are likely to experience both short term and long term pain, coupled with an increased likelihood of serious physical injury. In these situations, it is likely that the officer is under attack and usually does not have the time to use any other less violent technique to bring the offender under control.

The seventh response category is comprised of those situations when an officer either uses a baton to strike an opponent or uses a neck restraint to stop the flow of oxygen and blood away from the brain. While on the surface it may appear that these are two very different maneuvers, trainers and police administrators across the country agree that both of these techniques can and have been attributed to deaths if improperly used. Take for instance the use of baton strikes. Depending on the situation, very few officers would ever intentionally hit an opponent in the head, neck or face with a baton. However, in the heat of a struggle with the adrenaline of both the officer and suspect at increased levels, it is possible that a misdirected blow could land in a critical region and could cause a potentially fatal injury. For this reason, most departments encourage the use of batons only for control postures or defensive positions rather than as an impact weapon (Faulkner, 1991).

Similarly neck restraints, while commonly used in the early and late 1980’s are rarely used today. The theory behind neck restraints lies in the idea of hypo-ventilation. That is, the officer is not cutting off the flow of oxygen to the brain, but rather is preventing blood from leaving the cranial region. This results in a general swelling of the brain and pressure builds that escalates since the heart attempts to compensate for the loss
of blood flow by beating faster. Side effects include: temporary physical discomfort, dizziness, loss of conscienceless and death if the maneuver is not carried out correctly.

The final response category available is that of deadly force. Although neck restraints and baton strikes may cause death in a suspect, this category is reserved for those cases when the officers intends and attempts to fatally injure the suspect. As is evident, this category represents the most serious and highest level of force that officers are empowered to enact upon citizens in an organized state.

**Sample Vignette**

In order to gain a clearer picture of the vignettes used this study, I have included a sample so the reader may be able to conceptualize the format of each vignette. The sample vignette is presented below:
You are dispatched to a domestic violence incident in a middle class area, where calls for service are rare.

It is 3:00 in the afternoon and 2-3 other officers are present.

Prior to getting out of the cruiser, you are able to determine who the main suspect is. Four to five persons are assembling around the suspect in front of the doorway of a single family dwelling.

Upon close inspection, you determine that the suspect is a large-sized, Hispanic, male believed to be in his mid-twenties.

You move within five feet of the suspect and engage in conversation. The appearance of the suspects’ clothing is rumpled and messy. In general, the suspects demeanor toward you is best characterized as abusive and violent. And there are some indications of cocaine use.

Finding probable cause, you attempt to place the suspect under arrest. The suspect pushes you away each time you step close enough to gain control.

11. How many warnings would you give the suspect before using physical force to affect this arrest?

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<th>4 or more</th>
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Warnings

12. If verbal warnings and gentle touch techniques are not effective, what level of force would you apply next?

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<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>Deadly Force</th>
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<tbody>
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<td>Balance Displacement</td>
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</table>

13. What would you consider to be the highest level of appropriate force you would use to affect this arrest?

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<th>3</th>
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<th>5</th>
<th>6</th>
<th>7</th>
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<th>Deadly Force</th>
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<tr>
<td>Balance Displacement</td>
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</table>

**Coding Scheme**

1. Balance Displacement
2. Joint Manipulations or Pressure Points
3. Baton Techniques (No Strikes)
4. Striking Major Motor Points, Muscle Masses
5. Mace, Tear Gas or Electrical Devices
6. Empty Hand Striking, Punching and Kicking
7. Baton Strikes or Choke Holds
8. Deadly Force
Summary of Research Design and Analytic Procedures

The following chapter has discussed how the sample of officers for these analyses were selected, the utility of a factorial design, the analytic procedures to be used and presented how each of the predictor and dependent variables were constructed and coded. However what is missing is a discussion of what the extant literature has found to effect police force. The following two chapters will address the individual and situationally based elements social science has found be associated with police force. Following the summary of each of these factors, each variable’s influence will be examined using data from this study to see if the correlates of police force identified by prior research also predict the level of force officers’ believe is reasonable in a given vignette.
Chapter 4

Individual Level Variables Affecting Police Use of Force

Introduction

Studies delineating the effects of individual attributes of both citizens and officers on police behavior have increased in number over the last ten years (Reiss, 1969; Chevigny, 1969; Westley, 1953; Toch, 1969; Worden, 1995; Croft, 1985; Garner, 1995; Sherman, 1980). Findings from these studies indicate that a number of individual level factors are correlates of police force. More importantly, these studies seem to indicate that individual level variables influence increasing amounts of police force (Sherman, 1980).

It is also fairly well accepted that individual level characteristics of participants in police encounters influence the discretionary behavior of police officers and specifically the decision whether to arrest or not (Black, 1970). The formal action of taking a citizen into custody is a coercive action, that often precipitates the use of force. Therefore, in the following sections both the correlates of arrest and actual use of physical force will be covered. The correlates for arrest will serve only as a supplement when there is little research available on the correlates of police force.

If individual level variables are correlates of situations where force is used, the implication is that they also influence officers’ decisions concerning the level of force that should be applied. The present study, as noted examines the role of these factors by including them in vignettes officers were asked to evaluate. This approach permits an examination of the impact of the variables on the decision points of the use of force continuum.
Before proceeding in this discussion, it may behoove us to define exactly what type of variables are contained under the domain of individual level factors. Friedrich (1977:148) claims these factors include the behavior that “emanates from within the individual, as a product of the individual’s personality and attitudes” that socialize the individual or officer. These factors may take the form of attitudes, behaviors, biological characteristics or other individually specific factors which predispose the individual into specified behavioral patterns.” Therefore individual behavior patterns emanating from individual level determinants may be a result of either the officers, citizens or an interaction of each’s individual level traits. In this chapter it is these traits that we are most interested with.

In order to facilitate the discussion of these individual characteristics, this chapter is divided into three sections. The first section examines individual level factors of suspects that the extant literature suggests influences officers decisions to use force. This section includes a discussion of suspect’s race, age, physical attributes and gender. The second section details the individual level characteristics of officers believed to predispose them to use more force. In this section officer’s race, social class, age, physical attributes, gender, education, level of training and experience are examined. Included in this section is a discussion of the role an officer’s race, age, gender, physical attributes, years of service, level of training, education and experience play in contributing to the use of police force. The third and final section empirically examines these factors with data from the present study to determine if these factors play a role in their determination of the appropriate level of force that is called for in a given police-citizen encounter.
Within this final section, the analysis will be divided and categorized based on the strength of the relationships across the three dependent variables: number of warnings an officer would issue prior to using physical force, the level of force deemed appropriate and the highest level of force that could be considered reasonable. If the predictor variables significantly affect all three of the dependent variables, we can be reasonably confident in its influence across the three domains of force. Thus we expect this relationship to hold in any analysis of police force regardless of the form or method employed. Relationships that meet this criteria, will be considered to meet the criteria necessary to fall within the conservative estimates.

Should a predictor be significantly related to two of the three dependent variables pertaining to use of force, it will be considered to meet the liberal interpretation. This means that the individual predictor variable appears to significantly influence the perceived level of appropriate force, however there is some doubt as to it’s generalizability to other measures or methods designed to capture the amount for force that could be reasonably applied. In this case, one independent variable could be related to the appropriate and highest level of force considered, but may not be related to the number of warnings an officer would issue before using force. Thus the “fit” of this indicator may be dependent upon the context in which it is used. Therefore the findings under this criteria must be treated with more caution than those contained in the conservative estimates.

The final category for the estimates consists of those variables that are statistically significant with one of the domains of the appropriate level of force. This group of relations will be labeled as loosely coupled suggestions. Associations that fall into this
classification must be treated with extreme caution since these independent predictors are associated with only one of the three levels of force. At this point, we are not sure why these factors failed to load on more than one of the included dependent variables. It could be due to a result of non-linearity, measurement error or a product or co-shared variation. This classification scheme for the impact of these predictors will apply to the analyses in this chapter as well as Chapter 5.

**Characteristics of the Suspect**

It is important to examine the demographic and background characteristics of citizens who are more prone to have force used against them. Many of the earliest studies on police behavior have found that officers’ perceptions of an event, and their first impression of a suspect is based on the officers prior experience dealing with a specific type of suspect or event (Muir, 1977; Black, 1971). Skolnick (1977:42) claims that police officers are no different from persons employed in other occupations in that they “develop distinctive ways of perceiving and responding to their environment.” Unlike other occupations, police officers may deal with aggressive, dangerous persons who may or may not seek to challenge the officer as an individual or challenge his/her right to intervene.

Skolnick (1977) claims that because police officers work in an environment where the potential for danger is around every corner, they adopt a series of perceptual triggers that key them off to even the slightest indications of potential violence. Thus in situations where officers confront citizens in the course of their work, the first thing they typically do is to gather information that will help them decide if the suspect is dangerous, trustworthy and deserving of their respect.
As Skolnick (1977) claims, these cues can take the form of gestures, dialect or attire that the officer has come to recognize as triggers to violence. The cues that Skolnick suggests are predominately situational cues. However, there is often a set of cues that officers pick up on prior to getting close enough to assess the determinants of a situation. These cues may include the race, social class, gender and size of a potential suspect. Table 4.1 illustrates the findings of some of the major research efforts that have examined these cues which we have defined as individual level factors of suspects.

As shown in Table 4.1, the literature generally supports the supposition that individual level factors are strong predictors of situations where force is used (Croft, 1985; Alpert, 1989; Croft and Austin, 1987; Wilson, 1968; Reiss, 1967; Bogomolny, 1976; Black, 1971). While the literature appears to be quite sure that these factors are strong predictors of the use of police force, some have questioned the utility of using either race or social class because of the strong correlation between the two. As Fyfe (1981) notes, since these two variables are correlated so highly, it may be impossible to tell which is the causal variable. For this reason I will discuss what the literature has found concerning both the race and social class of suspects and arrestees. Following the logic set forth by Bayley and Mendelsohn (1969), in these analyses I will present to the respondent only the race of the suspect since officers are often able to distinguish individual’s race more readily than an abstract determination of their social class.21 However for the purpose of reviewing the relevant individual based literature, the

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21 Social class in the ensuing analyses will be treated as a situational variable in that an officer without an a priori knowledge of an individual should be able to distinguish the social class of the individual based on the area or community in which a given encounter occurs. The order of this relationship is not clear. For instance, Black and Reiss (1971:55) report that “the observation data show that class rather than race determines police conduct.” While Black and Reiss’ findings are noted, for the purposes of this study it was decided that the race of a suspect would be more readily conceptualized than an abstract determination of the SES of an unseen, unheard subject.
following section will indicate which variable (race v. social class) the studies reviewed examined.

**Suspect’s Race and Social Class**

When looking at individual level variables, one of the most critical variables in this area is the race and “perceived” social class of the citizen. The impact of the offender’s race or social class has been a long standing concern for students of the police since the number of contacts with lower class or minorities greatly outnumber contacts with middle to upper classes or whites. To date, a fair amount of evidence has been collected denoting the inequity of treatment of minorities and members of the lower class by the police. However, what is not clear is if differential treatment is due to officers’ perceptions of the citizenry or the citizenry’s perception of the officer.

Studies denoting differential treatment have confirmed that not only are black males stopped more often than their percentage in the population would dictate, but field interrogation stops of this population yield a 70 percent false positive rate (Bogomolny, 1976; Piliavin and Briar, 1964). The reasons that minority and/or lower class citizens have been singled out for interrogations are many; however, the research has shown that the police ascribe more pejorative traits to individuals of these groups. This assumption in turn heightens their chance of arrest (Reiss, 1967; Russell, 1976; Friedrich, 1977; Smith, Visher and Davidson, 1984). Even in the last half of the 20th century few would question these findings.

The theory as to why officers treat suspects of different genders or classes different is related directly to the discretionary choices that officers make in dealing with potential suspects. Examining the role of discretion in police work, Wilson (1968) found
that a person’s race or class provides the officer with special clues.\textsuperscript{22} Since it is the lower and minority classes that are seen as participating in the majority of street crime, the operational subculture of officers often designates lower class citizens’ actions and complaints as less legitimate than individuals of a higher standing.

Dealing specifically with the issue of race and the implementation of police actions, Friedrich (1977) found that among formal actions, black offenders stand a higher chance of being taken to the station and arrested than white offenders by a margin of better than 3 to 2 (Friedrich, 1977). This is true even when the original offense is controlled for. Other research has shown that race and arrest are independent (Berk and Loseke, 1981; Worden and Pollitz, 1984; Smith and Klein, 1984; Friedrich, 1977; Smith and Visher, 1981; Worden, 1989). Still others have found the relationship between race and arrest to be spurious because black offenders are also more likely to be disrespectful (Black, 1971; Sykes and Clark, 1975; Smith, Visher and Davidson, 1984).

Dealing directly with physical force, the Police Services data indicate that when force was used, blacks were the recipients of 64 percent of reasonable force and 50 percent of improper force. Thus leading Worden (1995) to claim that race of the suspect does affect an officer’s decision to use force. In contrast, Friedrich (1977) and Croft (1985) found that the race of the suspect made little difference. Looking at proportions of arrestees, Croft (1985) found that black males comprise 50 percent of the total arrestees and 50 percent of the use of force opponents. The same pattern holds for Hispanics.

\textsuperscript{22} Also see Skolnick’s (1966) discussion of the symbolic assailant.
Table 4.1
Prior Research On the Relationship of Suspects
Individual Level Factors And Increased Use of Police Force

<table>
<thead>
<tr>
<th>Author(s)</th>
<th>Year</th>
<th>Suspect Race</th>
<th>Suspect Gender</th>
<th>Suspect Class</th>
<th>Suspect Age</th>
<th>Suspect Size</th>
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* Denotes Study was primarily concerned with Deadly Force
-- Denotes Study Found No Effect for this Variable

Research on the implementation of deadly force tends to support Bayley’s and Mendelsohn’s (1969) contention that race plays significant role in how police resolve
serious disputes. Numerous studies have demonstrated that blacks are fairly well over-represented in the population that is shot at by the police relative to their number in city populations. But research also shows that minorities are also over-represented among those whose actions precipitate the use of the use of deadly force by police officers (Milton et al. 1977; Fyfe, 1980; Fyfe, 1981; Blumberg, 1981; Geller and Karales, 1981; Alpert, 1989; Geller and Scott, 1992). Suppositions that minorities have been shot at only because of their race have received support from only a limited number of studies (Meyer, 1980; Geller and Karales, 1981; Fyfe, 1982).

**Suspect’s Age and Physical Attributes**

Although the race and class nexus has proven to be an important indicator of the likelihood of coercive action, conventional wisdom and criminal justice trainers emphasize that a suspect’s age, physical size and/or strength often determines both how swiftly officers will resort to physical force and how cooperative the suspects are likely to be. (Faulkner, 1995; Cruse and Rubin, 1972; Wilson, 1968). Investigating these attributes, Cruse and Rubin (1972) focused their research on the factors that raised anxiety levels of officers during their patrol shift. They found that the most stressful type of opponent that police officers encounter are teenage males between the ages of 10 and 30 whose size was perceived to be either medium or large. They claim that the reasons for officers’ apprehensions in dealing with this cohort center on the unpredictability of their behavior coupled with their physical strength. Furthermore, these researchers found that as citizens become older, the size of the citizen becomes less important. Interestingly though, it was not until potential opponents reached the age of 50 did these authors report a significant drop in police-opponent stress (Cruse and Rubin, 1972).
While encounters with the young may heighten the anxiety felt by officers, Friedrich (1977) found that the young and the old were least likely to be arrested. This is consistent with Wilson’s (1968) findings that these groups are more likely to be treated informally. If formal intervention is least likely with these two subgroups, then the assumption would be that force is less likely to be used with these same groups. Thus adults approaching the age of majority and those under 50 years old appear to be the group most likely to be involved in interactions where force is used.

More recent research by Worden (1995) and Croft (1985) have confirmed that use of force is most prevalent in the “criminogenic years.” For instance in Rochester, St. Louis and St. Petersburg, 75 percent of the individuals against who force was used were under the age of 35 (Worden, 1995). Also, Croft and Austin (1987) found that the majority of the citizens against whom force was used were males between 16-28 years old. Similarly in Croft’s original analysis (1985), she found that 71 percent of the males and 76 percent of females against whom force was used were under the age of 30. At the same time, there did not appear to be a significant difference between the ages of force arrestees and non-force arrestees (Croft, 1985).

Research on police deadly force has yielded similar results. Fyfe (1982) found that this young cohort (males between the ages of 17-30) was also the predominate target of police shootings. He concluded that since there was a near perfect relationship between the age distribution of shooting opponents and arrestees for violent crime, blacks and other racial minorities are not disproportionately victims of police violence compared to whites. This finding leads us to believe that at the highest level of force,
race does not play a significant role in determining if officers will take the life of a actively resisting suspect.

**Suspect’s Gender**

Research seeking to explain how the gender of an opponent effects the amount of force utilized have found that females are at a significantly lower risk than males for the utilization of force by the police (Bogomolny, 1976). Over the last two decades, a considerable amount of research has been devoted to explaining the differences between male and female criminality. While most of these factors are unimportant to this discussion, it is important to note that females not only engage in less potentially violent criminal behavior, but also pose different risks for officers wishing to take control over potentially violent suspects.

For instance, Croft (1985) found that officers’ generally perceived female opponents to not be an aggressive opponent in situations where the police may use force. However, she states that female opponents can be as persistent as males in refusing to follow officers’ orders. The critical reason why females are victims of less police violence is that they rarely resort to any type of resistance other than passive or verbal confrontations. As such, it is less likely that an officer will use force to repel an attack.

Croft’s (1985) finding that female offenders are perceived to be less of a threat to officers’ authority has been supported by other research (Rubinstein, 1975; Pollak, 1950). For instance, Reiss (1971) found that almost all victims of police force were young, lower class males. Worden (1995) in his reexamination of the PSS data, found that almost three fourths of those against whom force was utilized were male. Similarly, Friedrich (1977)
found that women were the recipients in only in 17 percent of the force incidents studied. However none of these studies controlled for opportunity.

**Characteristics of the Officer**

Just as the suspect characteristics are important in determining the amount of force used in police-citizen encounters, so are the attitudes, values and other physical characteristics of officers. Presented in Table 4.2 are the findings from extant literature that have looked at individual level characteristics of officers associated with situations where the police use force. These characteristics of officers (race, physical attributes, gender, education and experience) will be described in greater detail in the following sections.

**Officer’s Race**

Prior to examining the effect of officer’s race, it is important to understand that one must control for the effect of all relevant factors before the individual effects of race can be understood. In the field, few studies have been able to model effects the literature says plays a pivotal role in an officer’s decision or predisposition to use force. However, several studies have been able to examine the relationship between officer’s race behavior such as the use of force.
Table 4.2
Prior Research On the Relationship of Officers
Individual Level Factors And Increased Use of Police Force

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<th>Author(s)</th>
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<th>Officer Race</th>
<th>Officer Size</th>
<th>Officer Gender</th>
<th>Officer Age</th>
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* Denotes Study was primarily concerned with Deadly Force
-- Denotes Study Found No for the Effect for of this Variable
In general, black policemen are thought to behave differently in the field especially when the encounter involves a black suspect. Stevens (1974) stated that these officers will engage in less racist behavior and brutality than white officers when dealing with black residents. However, others have found that black officers may deal more harshly with black offenders than with whites (Kelly and West, 1973; Banton, 1964). More recently, Fyfe (1978) found that black officers were more likely to be involved in use of force and deadly force situations than white officers. Fyfe notes that this may occur because black officers are assigned to tougher, high crime districts more often than white officers, though the impact of district assignment was not controlled for in his analysis.

In another study, Brooks (1989:138-140) found that while black officers are likely to be held in a higher regard in black communities, there is a greater likelihood that these officers will be more aggressive and make more arrests than white officers in similar setting (Brooks, 1989:138-140). However, the observed differences in the treatment of black citizens by black officers might have more to do with the frequency of contact than the race of the citizen. This competing hypothesis was addressed by Friedrich (1977). He found that on the average, black officers arrested offenders at roughly one-and-a-half times that of white officers. Further, when race of the offender was controlled for, black officers still made four percent more arrests than white officers.

Contrary to other research looking at arrest decisions, officers’ race was not found to be associated with police force (Worden, 1995). Concurring, Garner (1995) found that white officers used no more did force than non-white officers. However Worden
did find that black, educated officers are less likely to use improper force than white, uneducated officers.

Within the genera of deadly force, Fyfe (1981) and Geller and Karales (1981) found that minority officers were more likely to be involved in police shootings. However when duty status and assignment were controlled, there existed little difference between the behavior of blacks and whites. Similarly, Blumberg (1982) found that in Kansas City there was no relationship between officer race and shooting behavior. And finally, Croft (85) found that in the 430 officers studied the relationship between officer race and level of force used was not statistically significant.

These findings along with the literature on the suspect’s race/social class appear to suggest that both the race of officers and citizens may have an impact on an officer’s decision to use force. While the evidence is mixed, there does appear to be a weak relationship between the race of the officer and that of the suspect. The literature suggests that black officers are more likely to arrest than white officers, and black citizens are more likely than whites to be subjected to more forceful resolutions.

**Officer’s Age and Physical Attributes**

In the literature, there is sparse mention of the relationship between the physical attributes of the officer and the likelihood of the use of force. Although police trainers claim physical attributes to be one of the most important factors in the escalation of force, little scholarly attention has been paid to its effect. Conventional wisdom states that younger, heavier, taller and more muscular officers may present a more demanding presence and present an impediment to resistance. However, early studies looking at police officer performance found no differences between short and tall officers who have
similar experience and assignments (White and Bloch, 1975; Hoobler and McQueeny, 1973; Swanson and Hale, 1975).

Similarly, Blumberg (1982) found no relationship between height and officer shootings among male officers in Kansas City, a finding confirmed at the non-lethal level by Croft (1985). Still Croft (1985) did find low force officers under the age of 30 were likely to weigh an average of 20 pounds more than those she classified as high force officers. Finally, Cohen and Chaiken (1987) found that shorter officers were more likely to use force. While the literature does not provide explicit findings regarding the effect of an officer’s size or other physical attributes, there does appear to be a consensus that with the proper training, the physical size or attributes of the officer should not effect the likelihood of the police use of force.

**Officer’s Gender**

The examination of the role that gender plays in the implementation of force has received much less attention most likely due to the limited number of women on patrol duty. Demonstrating this problem, in Worden’s (1995) Police Services Study all of the force incidents involved male officers. However as early as 1974, Bloch and Anderson (1974) hypothesized that the possibility exists that police women who deal with the same situations as male officers are less likely to experience violent situations.

In their analysis, Bloch and Anderson (1974:5,14) found that female officers were less likely than their male counterparts to initiate citizen encounters and make arrests. More generally, they found that female patrol officers were less likely to practice aggressive patrol tactics. Not only were female officers less aggressive, but they tended to be less likely to use force. Grennan (1987), Greenwald (1976) Sichel et al., (1977) and
Sherman (1975) confirm this finding. These early findings are summed up by Blumberg’s finding that “female officers have a less aggressive style of policing” (Blumberg: 1982:66). However, recent research has found no differences in gender for either high risk or low risk officers (Croft, 1985).

**Officer’s Age, Education and Experience**

The same variables for officers as suspects are often included as explanations for either decisions to use force or the amount of police force imposed. When dealing with such variables as an officer’s age, amount of experience or level of formal education, it is often theorized that more experienced officers tend to be more authoritarian and cynical (Neiderhoffer, 1967; Rhead, 1970). Thus the possibility exists that these officers will be more aggressive in their dealing with citizens.

However, others such as Friedrich (1977) have found that older, more experienced officers are about six times as likely to relax their patrol efforts than are officers with the less experience. With regard to traffic arrests, Friedrich (1977) found that the least and most experienced officers were the most likely groups not to invoke the law, while those officers with between two and eight years of experience were most likely to patrol the most aggressively. Based on his sample of three large metropolitan areas, Friedrich (1977) suggests that police effort might decrease as length of service increases thereby affecting the frequency of contact.23

However, Croft (1985) found that low force officers (longer service) make almost the same number of arrests as high force officers. Suggesting that notions concerning the quality or types of contact that the police have with the public are not related to length of

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23 Also see VanMaanen (1973) “Observations on the Making of Policemen.”
The age of officers may be another story. For example, Croft (1985) found that younger officers (those between the 25 and 36) are more likely to resort to using force than are older officers. Other studies have reached similar conclusions showing that younger officers have a slight tendency to be more involved force incidents (Blumberg, 1986, 1991; Shortreed, 1989; Cohen and Chaiken, 1972).

Looking at years of experience, the literature has shown that the officers most likely to use force have as much as 3.9 fewer years of experience than the average. Further, officers having the lowest level of force scores have on the average 11.5 more years of experience than the high-force officers (Croft and Austin, 1987). Therefore, conclusions that officer inexperience may contribute to greater levels of police force appear plausible (Croft and Austin, 1987; Bayley and Garofalo, 1987).

As to the relationship between age, experiences and deadly force, Blumberg (1982) found that both age and length of service were significantly associated with an officers’ shooting behavior. Specifically, after controlling for risk exposure, he found that younger officers with fewer years of service were more likely to be involved in deadly force incidents. Blumberg suggests this occurs because younger officers may be more duty conscious and may work harder (Blumberg, 1982).

In contrast, other research endeavors have failed to support these findings. For instance, Worden (1995) in his PSS study failed to find any significant age or experiential difference in officer willingness to become involved in use of force incidents. In fact, Worden (1995) found that in the 5,688 police-citizen encounters coded, the mean age for officers involved in non-force or reasonable force encounters was 30.5 years. The average age for officers involved in improper force situations were on average only half a
year younger. Other studies have echoed Worden’s (1995) findings that neither an officer’s age or length of service has a relationship to officer use of physical force (Friedrich, 1977).

Extant research also suggests that the educational level of officers affects police behavior. One of the most complete studies of the relationship between officer’s education and behavior was completed by Cohen and Chaiken (1972). These authors compared the background characteristics of the officers to a series of subsequent performance measures, one of which was civilian complaints. Using a cohort design they followed 1,915 cadets of the New York City Police Department and found that white, older, and better educated officers at the time of appointment were significantly less likely than younger and less educated officers to have complaints filed against them. In a series of related studies, Cascio (1977) McGreevy (1964) and Bozza (1973) reached similar conclusions.

Looking at studies focusing on the use of physical force, Worden (1995) reports that better educated officers resort to using force less often, while Croft (1985) found that the officer’s educational level and the number of forceful incidents are independent. Whichever way is chosen to look at the officer’s education and forcible incidents, it is clear that this relationship is difficult to disentangle and must be treated with caution. It may be that both studies findings are correct, since there is a distinct possibility that better educated officers may be more likely to be promoted and therefore are less likely to be dispatched to situations where force may be required.
Analysis of Individual Factors

The factors presented in the first two sections represent the current state of knowledge concerning the individual level correlates of police coercive force. While not all of the relationships deal with the use of physical police force directly, there is an implicit assumption that these same variables effect when police use force and the amount deemed appropriate for a given police-citizen encounter. This section will empirically test if these factors do predict either the number of warnings an officer would issue prior to using force, the appropriate and the highest level of force officers would consider reasonable.

As shown in Table, 4.3, there are a limited number of individual based factors that significantly predict one of the three dependent variables representing the level of force, the respondents would consider using. The limited number of predictors is not surprising considering Friedrich’s (1977) finding and Sherman’s (1980) contention that individual level factors play a small role in determining the final outcome of encounters where force may be used. In these analysis, the addition of 19 independent variables explains only between 4 to 6 percent of the variance in the level of force that officers believe to be appropriate.
Table 4.3  
Multiple Regression of Individual Level Predictors  
and Efficacy of Appropriate Police Response

<table>
<thead>
<tr>
<th>Independent Variables</th>
<th>Number of Warnings</th>
<th></th>
<th></th>
<th>Level of Appropriate Force</th>
<th></th>
<th></th>
<th>Highest Level of Force</th>
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<tr>
<td></td>
<td>b</td>
<td>Std. Error</td>
<td>Beta</td>
<td></td>
<td>B</td>
<td>Std. Error</td>
<td>Beta</td>
<td></td>
<td>b</td>
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<tr>
<td>Officer – Gender</td>
<td>.202</td>
<td>.248</td>
<td>.033</td>
<td>.487</td>
<td>.468</td>
<td>.043</td>
<td>.269</td>
<td>.393</td>
<td>.028</td>
</tr>
<tr>
<td>Officer – Height</td>
<td>-.012</td>
<td>.129</td>
<td>-.030</td>
<td>-.015</td>
<td>.032</td>
<td>-.020</td>
<td>-.012</td>
<td>.027</td>
<td>-.019</td>
</tr>
<tr>
<td>Hispanic Officer –</td>
<td>-.211</td>
<td>.569</td>
<td>-.013</td>
<td>-.185</td>
<td>1.126</td>
<td>-.062</td>
<td>-3.252***</td>
<td>.945</td>
<td>-.129</td>
</tr>
<tr>
<td>Hours of Defensive</td>
<td>-.003*</td>
<td>.002</td>
<td>-.067</td>
<td>.002</td>
<td>.003</td>
<td>.020</td>
<td>.003</td>
<td>.003</td>
<td>.043</td>
</tr>
<tr>
<td>Tactics Training Last Year</td>
<td>.005</td>
<td>.004</td>
<td>.046</td>
<td>-.001</td>
<td>.007</td>
<td>-.003</td>
<td>.001</td>
<td>.006</td>
<td>.006</td>
</tr>
<tr>
<td>Officer - Hours of</td>
<td>.002</td>
<td>.003</td>
<td>.022</td>
<td>-.007</td>
<td>.006</td>
<td>-.041</td>
<td>.006</td>
<td>.005</td>
<td>.043</td>
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<tr>
<td>Training on Community</td>
<td>-.114</td>
<td>.099</td>
<td>-.045</td>
<td>.071</td>
<td>.187</td>
<td>.015</td>
<td>.091</td>
<td>.157</td>
<td>.024</td>
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<tr>
<td>Policing During the</td>
<td></td>
<td></td>
<td></td>
<td>.168*</td>
<td>.093</td>
<td>.071</td>
<td>.089</td>
<td>.176</td>
<td>.020</td>
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<tr>
<td>Past Year</td>
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<td></td>
<td>Officer – Trained in Verbalization</td>
<td>.000</td>
<td>.001</td>
<td>.077</td>
<td>-.002</td>
<td>.002</td>
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<tr>
<td>Techniques</td>
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<td></td>
<td>Officer – Black</td>
<td>-.539**</td>
<td>.252</td>
<td>-.082</td>
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<td></td>
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<td></td>
<td>Officer - Years of Service</td>
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<td>.039</td>
<td>.018</td>
<td>.018</td>
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<td></td>
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<td></td>
<td></td>
<td>Officer- Age</td>
<td>-.011</td>
<td>.008</td>
<td>-.086</td>
<td>-.014</td>
<td>.014</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td>Officers - Years of Education</td>
<td>.009</td>
<td>.024</td>
<td>-.015</td>
<td>.020</td>
<td>.045</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td>Suspect - Asian</td>
<td>.002</td>
<td>.129</td>
<td>.001</td>
<td>.301</td>
<td>.243</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td>Suspect - Gender</td>
<td>304***</td>
<td>.091</td>
<td>.127</td>
<td>.721***</td>
<td>.173</td>
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<td></td>
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<td>Suspect – Hispanic</td>
<td>.259**</td>
<td>.130</td>
<td>-.093</td>
<td>.110</td>
<td>.246</td>
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<td></td>
<td></td>
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<td></td>
<td>Suspect – Size</td>
<td>.099*</td>
<td>.055</td>
<td>-.069</td>
<td>.028</td>
<td>.103</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Suspect - Black</td>
<td>.043</td>
<td>.129</td>
<td>.016</td>
<td>-.018</td>
<td>.243</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Suspect – Age</td>
<td>.004</td>
<td>.011</td>
<td>.014</td>
<td>.001</td>
<td>.021</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Constant</td>
<td>4.524***</td>
<td>1.226</td>
<td>4.097*</td>
<td>2.316</td>
<td>6.065**</td>
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<tr>
<td>Model R²</td>
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<td></td>
<td></td>
<td>.049</td>
<td>.042</td>
<td></td>
<td>.056</td>
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* Denotes Significance at the .10 level. ** Significant at .05 level; *** Significant at .001 Level

Regarding the significant predictors of the level of force considered appropriate, these data show two factors to be negatively related to the number of warnings an officer would issue prior to using physical force. These factors include the number of hours of...
defensive tactic training an officer had in the past year and if the officer was black. One the other hand, officers who had been trained in verbalization techniques who dealt with either black or hispanic suspects, were likely to give the suspects fewer second chances to comply with an their demands.

At the appropriate level of force, only the gender of the suspect was significantly related to the level of force considered appropriate. In this case, males were likely to be rated by officers are deserving of more force than females. And at the highest level, older, black, hispanic or female officers were on the average likely to rate the highest level of force they would consider using lower than young, male, white officers.

While these individual predictive elements are important, what we are really interested in is if these individual level variables are significantly related to the level of force considered appropriate that encompasses the entire encounter. Thus, it makes little sense to examine only those factors contribute to the officers’ perceptions of the number of warnings they would issue, because rarely is that an issue when an administrative or court official is trying to determine if the officer should have simply issued one more warning or gave the suspect one more chance to comply with his/her directives. Therefore, if the included individual level variables are strongly related to the level of force an officer feels is appropriate, and are a contributing factor to the final outcome of how an event unfolds, one would expect the relationship to hold across all three of the study’s domains of force. Relationships that meet this conservative criteria should be considered the strongest and most notable predictors of the appropriateness of police force. However, since questions denoting the level of force deemed appropriate, as measured by the three dependent variables, are worded differently, a more liberal criteria
for the strength of the relationship would also seem appropriate. This liberal interpretation would require that the relationship between the independent variables and the dependents be related on two of the three dimensions. And finally, a third level of strength will also be examined. This group, termed loosely-coupled, is comprised of individual level predictors that are related to only one of the three domains of the dependent variable(s). This group of relationships are, and should be, considered the weakest of all the effects.

**The Conservative Interpretation**

As illustrated in Table 4.3, only one predictor meets the conservative constraints set forth above. This variable, SUSPECT - GENDER, withstood significance testing across the number of warnings an officer would issue prior to using physical force, the level of appropriate force and the highest level of force that would be reasonable. This being the case, it is likely that female suspects not only pose less of a threat to officers but may be more likely to comply with lower levels of force.²⁴ This being the case, females are likely to be given more warnings by officers, and viewed as candidates for lower levels of force, when compared to males.

**The Liberal Interpretation**

Adopting a more liberal interpretation, only one additional variable is added to the model. This variable OFFICER - BLACK, indicates that black officers, compared to whites, perceive that they should issue more warnings prior to using actual physical force. Black officers, rate the highest level of force they would consider appropriate approximately one degree less than that for whites. While there may be many reasons for
these effects, paramount among them is the contention that black officers may be more sensitive to the intrusions of police force than their white counter-parts. Alternatively, it be could argued that black officers view force as a less desirable means for gaining compliance from resisting suspects. However, this argument may be of dubious value since there is little difference between the level of force that black and white officers view as the highest level of force appropriate.

The Loosely Coupled Interpretation

The third tier of findings in this section detail the effect of five individual level predictors on either the number of warnings to be issued prior to using physical force or the highest level of force considered appropriate. As noted in the previous section, there appears to be a relationship between the ethnicity of officers and their perceptions of the highest level of force that would be considered appropriate. As shown in Table 4.3, hispanic officers are likely to rate the highest level of force considered appropriate almost three levels lower than that for whites. The same reasoning holds for this findings as does for the liberal interpretation of OFFICER - BLACK, however the mean difference between hispanics and whites or black and whites, is considerably greater than the relationship between blacks and Hispanic’s. Thus Hispanic officers may be the least likely group to estimate higher levels of force as either reasonable or appropriate.

The second and third variables that comprise the loosely coupled suggestions focus on the amount and type of training that officers received and the number of warnings they feel should be issued. This is case the hours of defensive tactics training (HOURS - TACTICS) the officers they received in the past year is negatively related to

\[24\] Recall from Chapter 3 that the values for the number of warning issued is reverse coded so that higher values
the number of verbal commands issued. That is, officers with more training in defensive
tactics are likely to issue more warnings than those with less training. Similarly, officers
who had received training in verbalization techniques (VERBAL JUDO) “verbal judo”
in this sample appear to be willing to offer potential suspects fewer warnings prior to
using physical force. It is supposed that officers who undergo this type of training will be
more capable of dealing with hostile subjects in such a way that actual physical force
may not be required. The significance of this variable may be interpreted in two ways.
First, it may be that officers who undergo this type of training have more confidence in
their ability to persuade people and believe that they capable of getting the same results
with fewer verbal utterances. An alternative explanation may also center upon increased
officer confidence in their ability to influence suspect’s behavior. It may be that if
citizens do not respond in the desired way, officers who have been trained ion
verbalization techniques may be more likely to use physical force since they feel that
there is no way through their training, their intentions could have been misunderstood.

The fourth and final variable in this section that withstood significance testing
regarding the number of warnings officers would issue concerned the size of the suspect.
These data indicate that larger suspects (SUSPECT SIZE) are more likely to be given
fewer warnings than either medium or small sized suspects. This relationship holds even
when the height and weight of officers are controlled. This findings does not not mean
that large suspects are likely to receive increased levels of force. What this relationship
implies is that officers in this sample are likely to be more aware and defensive in dealing

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indicate an officers willingness to offer fewer commands before physical force is utilized.
with suspects who appear to be a greater physical threat to themselves or others in the immediate vicinity.

While the significance of the effect of the gender of the suspect, officer race, hours of defensive tactics training, prior training in verbalization techniques, and suspect size are important findings, more important is the relationship patterns that did not withstand significance testing. From these data, it appears that the majority of the variables the extant literature says influences an officer’s decision to use force do not exert the presumed effect. Such variables as officer’s age, size, height, weight, experience in force situations, educational level or injuries resulting from physical confrontations with suspects appear to be unrelated to an officer’s decision regarding when and at what level force is to be used. Similarly, the suspect’s age and demeanor, at least in these analysis did not exert a statistically significant effect on the decision to use one level of force over another.

**Summary of Individual Level Factors:**

While the models presented in this paper are important for the relationships they confirmed, the real importance of this effort may lie in relationships that are commonly held amongst those who study police force. The suggestion that such individual traits of officers such as: gender, height, weight, years of service, educational level, number of physical confrontations and injuries resulting from these experiences did not withstand empirical testing, questions our current state of knowledge concerning what officers are more likely to use force and by default, the levels of force they deem appropriate. Other individual factors of suspects such as: race, demeanor, age, and size call us to question
contemporary notions regarding how officers react and relate to citizens in the course of their occupational mandate.

Given the vastness of the literature said to affect police use of force, it would behoove us to critically review those factors that the literature indicates are precipitators of the use of more or less force. These data indicate that if a department wanted to control and curtail the use of force in police-citizen encounters, the best approach would be to increase both the quality and quality of training for officers when it comes to such issues as cultural awareness and sensitivity (OFFICER HISPANIC, OFFICER BLACK, SUSPECT HISPANIC), force alternatives and tactics (VERBAL JUDO, SUSPECT SIZE).

The importance and relative influence of these individual level factors will become more apparent later as they are placed into the context of a vignette with other variables from situationally based domains. The next chapter will explore the second part of this dyad, the situational level factors that influence officer’s decision to use force.
Chapter 5

*Situational Level Variables That Affect Police Force*

**Introduction**

Another commonly used approach to studying factors that contribute to police force has been the examination of situational factors that precipitate potentially violent police-citizen encounters. It is often claimed that the structural characteristics of police-citizen encounters determine the outcome of such encounters independent of individual factors. As Friedrich (1977) points out, police behavior under this conceptualization is best thought of as a stimulus-response paradigm. Where for every action that is invoked by the citizen, characteristics of the situation or the physical environment in which the citizen action occurs, combine to elicit a reaction from the responding officer.

Unlike that of individual factors, there is a vast literature directly tying situational determinants to police behavior and force. As illustrated in Figure 5.1, these situational correlates include the appearance and demeanor of suspects, officer mode of entry, suspicion of drug or alcohol use, time of encounter, seriousness of original offense, physical site of encounter, number of witnesses present, neighborhood characteristics, number of officers at the scene, and the visibility of the encounter and resistance of the citizen(s) (Sherman, 1980; Black, 1971; Friedrich, 1980). Reiss (1969) states that situational factors such as these provide officers with mental clues as to the type of resistance likely to be encountered. These clues then influence the officers decision concerning the best way to respond.

Based on the scope and variety of factors that are included under this section, it may ease the interpretation of such factors if we define these elements as those
circumstances that tie people and their communities to actual police behavior. Under this conceptualization, situational factors are not thought of as independent explanatory variables but as contributing factors that make individual based explanations more clear.

Demeanor of the Participants of an Encounter

One of the most prominent situationally relevant factors is the demeanor of both the intervening officer and the citizen. Until recently, little attention had been paid to the interactional dynamics between officers and citizens (Sykes and Brent, 1980). The few studies that did, were generally concerned with the decision to arrest, rather than the application of police force (Piliavin and Briar, 1964).

One of the major problems in studying the dynamics of police-citizen interactions focuses on the interplay between citizens and how they react to others in authority. During the heyday of the police professional movement, officers were taught that the best way to deal with citizens was to command respect and to confront those who refused. Looking at how officers learn their craft, Hunt (1985) found that new officers out of the academy earn the respect of their co-workers not by observing the legal niceties of the job, but rather by being aggressive and using whatever force is necessary to achieve law enforcement ends. This approach, while being efficient in that it may conserve the resources utilized by the police, often carries with it a human cost. Since officers responding to a call for service may have only limited information concerning the real problem, the interplay with the citizen witnesses or suspect may influence if a situation is resolved, a crime is solved, how citizens view the police and ultimately how a witness or

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25 Although arrest is typically not thought of as an application of force, it is considered here as one because it is thought that any application of the officer’s will over that of the citizen may be considered a forceful imposition.
suspect responds to the officers’ directions. Therefore the manner in which officers present themselves and their directives to citizens can have profound consequences for both citizens, officers, their department and community.

Since the early studies observing the construct of police discretion, many have taken a serious look at the effect of an officers’ demeanor and it’s potential for the escalation of force. Looking at police officers’ initial entree into a scene, Reiss (1967) found that the police behaved in a professional or business-like manner in about 74 percent of instances, personal or jovial in 15 percent and were hostile or derisive in 11 percent of coded encounters which resulted in force. Reaching results similar to the early studies on officer discretion with juveniles, Reiss (1967) found that the police were most likely to respond to a citizen in the same manner in which the individual treated them. Thus, officers were more likely to be hostile or antagonistic when the citizen is also hostile and antagonistic than when he/she is calm or detached, leading him to conclude that police behavior was closely related to citizen behavior.

**Subject’s Demeanor**

Just as the officer’s demeanor is thought to affect police force, so is the attitude assumed by the citizen/suspect. Even though Conner (1991) found that 95 to 98.5 percent of all police-citizen contacts involve cooperative citizens, when the citizen is not cooperative his/her demeanor is a primary determinant of police action. Similarly, Chevigny (1969) in looking at pending complaints of police use of force filed, found that of the authenticated use of force complaints, 71 percent rose out of citizen defiance of police authority. In the majority of these cases, (61 percent) citizen defiance involved speech rather than acts.
## Table 5.1
Prior Research On the Relationship of Situational Level Factors And Increased Use of Police Force

<table>
<thead>
<tr>
<th>Author</th>
<th>Year</th>
<th>Suspect Demeanor</th>
<th>Officer Demeanor</th>
<th>Alcohol/Drugs</th>
<th>Type of Encounter</th>
<th>Physical Resistance</th>
<th>Number of Officers Present</th>
<th>Number of Citizen Present</th>
<th>Offense Seriousness</th>
<th>Type of Place</th>
<th>Time of Day</th>
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<td></td>
<td></td>
<td>S,V,A</td>
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<tr>
<td>Banton</td>
<td>1964</td>
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<td>Black</td>
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<td>Black and Reiss</td>
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** Coding Scheme: Suspect Demeanor (D=Disrespectful, U=Uncooperative, Hostile); Officer Demeanor (D= Disrespectful); Alcohol/Drugs (Y=Yes); Type of Encounter (P=Proactive); Physical Resistance (A=Actively Resisting); Number of Officers Present (M=More); Number of Citizens Present (M=More, F=Fewer); Offense Seriousness (PD=Public Disorder, S=Serious, V=Violent, A=Flight in Automobile); Type of Place (PU=Public, PR/Private); Time of Day (E=Evening/Early Morning)
Sherman (1980) claims that as many as eight observational studies have found “disrespectful” or “uncooperative” citizens are more likely to be arrested (Piliavin and Briar, 1964; Black and Reiss, 1970; Black, 1971, Petersen, 1972; Lundman, 1974; Sykes, Fox and Clark, 1976; Friedrich, 1977, Lundman, Sykes and Clark, 1978). For instance, Reiss (1967) reported that in approximately 60 percent of all officer-suspect encounters, the suspects behaved in an unattached or civil manner. Twenty percent of the citizens were reported as being agitated or upset and an additional 10 percent were classified as being antagonistic. Of the openly defiant group, Friedrich (1980) claims that these citizens were twice as likely to be arrested than offenders who remained calm. Interestingly enough, apathetic suspects were 5 percent more likely to see the formal process of law invoked than those who remained calm. The implications of these studies suggest that police decisions to arrest or to use force, may largely be a manifestation of a citizen’s disrespect for officers’ authority. Toch (1969) states that in instances where simple verbal threats are ignored, repeated threats often escalate to a point where officers feel that only physical force is capable of helping them achieve citizen compliance.

While taking the citizen into custody is in some circles considered a use of force, other studies have examined the actual implementation of an officer’s physical authority over unwilling citizens. In this genera, Worden (1995) found that about half of those against whom force was used either properly or improperly displayed a hostile or antagonistic demeanor toward the arresting officer(s). More than half of them had fought with the officers and twenty percent possessed a weapon.
Suspicion of Drug or Alcohol Use

Given the significance of a citizens demeanor and the likelihood of formal actions, Friedrich found that indications of alcohol or drug usage also precipitate use of force (Reiss, 1967; Fogel, 1987). For instance, many studies have shown that between 50 percent and 70 percent of the incidents where force was implemented also involved alcohol or drugs (Worden, 1995; Friedrich, 1977). Other studies have confirmed this relationship but question how frequently alcohol or drugs may have had an actual role in the melee. Gerald (1983) states that alcohol and drugs may often be recorded as a precipitating factor for police force, even when there are no indications of the presence or use of such substances. He claims the reasons for this are many, however officers on the street know that the inclusion of suspected substance abuse may shield them from subsequent civil or criminal liability.

From these studies it seems obvious that the effects of drugs, alcohol or other mood altering drugs do affect police-citizen encounters in one of three ways. First, the presence of these substances may predispose an officer to use more force based on a perceptual belief that citizens may resist more actively. Second, citizens may resist officers authority more readily once their inhibitions are lowered because of substance usage. Finally, both of the above factors may be at work resulting in greater police use of force for citizens under the influence.

Officer Entry

Another situational factor believed to affect the likelihood of police use of force is the method of entry into the situation. Reiss (1971) found that in proactively initiated encounters officers are more likely to be treated with antagonism than if they simply were
dispatched to a call based on a citizen complaint. Black (1971) and Lundman (1974) claim that the primary reason proactive encounters are more likely to involve force is because there is a formal intrusion of the officer into the lives of citizens when no such imposition was desired. In these situations, citizens are likely to respond negatively as they resent the imposition of the officer’s presence and any subsequent commands that they may be issued. Sherman (1985) and Reiss (1971:61) found this resentment of the officer’s intervention on behalf of citizens in proactive initiated encounters to be a major factor in proactive encounters determining if the encounter is likely to either involve force or be labeled as violent.

Generally the literature is quite emphatic that there is a qualitative difference between proactive and reactive police mobilizations. However, others have looked at officer entry in a different way. For instance, Croft (1985:121) conceptualized officer entry as either involving arrest or peace making activities. Looking only at situations where force was used she found that the utilization of force was evenly split between arrest and peacekeeping interventions. Interestingly, only 30 percent of all cases where force was used involved an officer attempting to make an arrest. Therefore, in 70 percent of all cases where force was used, officers were either attempting to breakup a fight, searching a suspect, or investigating a suspicious person. Similarly, others such as Bayley and Garofalo (1987) found that in 84 percent of all forcible encounters the officer only grabbed, pushed, or restrained a citizen.

Other research has suggested that when an officer arrives at the scene of an incident, the officer focuses primarily on the most serious behavior exhibited by an opponent upon arrival. Croft (1985) found that in less than one-half of the force situations
she studied, did the officer enter a scene with an actively aggressive opponent. Further, Garner (1995) reports that in entry situations where the opponent uses force, the police respond with some type of force 22 percent of the time. As the level of force employed against the officer increases, so does the level and probability that force will be used against the citizen.

In situations, where the suspect is not actively involved in the commission of a behavior that may be interpreted as either dangerous or a threat to the officer or others nearby, Croft (1985) “verbalization” or “talking a suspect to jail” is the most frequently used and advocated form of making an arrest. However, verbal commands are often ignored. Croft (1985) found that if such a command was ignored, another was most often given. Interestingly enough, she found that when the officers issued verbal commands, the most frequent response of the opponent was to attack the officer. Although we do not know the contents of the officer’s commands, she found it may lend credence to the notion that officers need further training in non-violent dispute resolution.

Attacks of officers by citizens are important at any level. For instance, Garner (1995) found the most serious and forceful situations between officers and citizens occur when a citizen attacks the officer with a dangerous object or weapon. In these cases, officers either drew (14 percent) or shot (6 percent) their firearms. Conversely, it is apparent that in 80 percent of cases where the officers faced great physical danger, they did not resort to fatal force. Garner (1995) also found that the second most serious encounter that officers face in their interactions with citizens are those involving the mentally ill. He reports that of all the encounters with the mentally ill, 26 percent involved the suspect attacking the officer with a deadly weapon.
**Officer-Citizen Interactional Dynamics**

One way to look at the interactional dynamics between officers and citizens has been to link up the behavior and resistance of suspects and the actions taken by law enforcement. Models that depict officer responses to individual action are often categorized as continuums of force. Under this conceptualization an officer’s response varies in direct relation to the behavior of the suspect. Such models have been helpful for law enforcement trainers in providing officers with some framework for the type of defensive/control tactics that individual situations call for.

One of the first attempts to conceptualize police force as continuum in order to explain the use of force in the field was undertaken by Croft (1985). Although her analysis was not very sophisticated, she was able to determine that when officers encountered either fighting, fleeing, or passively resisting suspects, the most common tactic used by officers to control suspects was some type of arm hold or hand restraint.

When the suspect threatened to attack an officer with a non-lethal object, the most common response was a combination of first attempting to restrain the opponent followed by wrestling on the ground with the citizen. As shown in Table 5.2, if a suspect approached the officer with a knife or some other weapon with the intent of stabbing or gouging the officer, the officers typically chose to strike the individual with a baton. Interestingly enough, for those opponents who attacked the officer with a firearm, the responses were split between wrestling with the individual, drawing their gun and actually firing their weapon. Croft (1985) concluded that instances of deadly force were averted in 87.4 percent of the cases when the officers life was placed in danger by having a weapon pointed in their direction.
Table 5.2
Most Serious Opponent Behavior as Related to Most Serious Officer Use of Force: Rochester, New York 1973-1979

<table>
<thead>
<tr>
<th>Most Serious Opponent Behavior</th>
<th>Restrain</th>
<th>Mace</th>
<th>Wrestle</th>
<th>Fight</th>
<th>Stike w/ Baton</th>
<th>Draw Gun</th>
<th>Shoot Gun</th>
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<th>Column Total</th>
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<tr>
<td>Run Away</td>
<td>33</td>
<td>7</td>
<td>10</td>
<td>0</td>
<td>1</td>
<td>7</td>
<td>7</td>
<td>65</td>
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<td>Passive Resistance</td>
<td>78</td>
<td>5</td>
<td>5</td>
<td>1</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>92</td>
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<tr>
<td>Bodily Fight¹</td>
<td>722</td>
<td>148</td>
<td>559</td>
<td>159</td>
<td>161</td>
<td>17</td>
<td>6</td>
<td>1772</td>
<td>79.1</td>
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<tr>
<td>Attack with Object²</td>
<td>29</td>
<td>21</td>
<td>28</td>
<td>13</td>
<td>9</td>
<td>5</td>
<td>7</td>
<td>112</td>
<td>5.0</td>
</tr>
<tr>
<td>Attack with Knife</td>
<td>18</td>
<td>17</td>
<td>22</td>
<td>12</td>
<td>28</td>
<td>15</td>
<td>5</td>
<td>117</td>
<td>5.2</td>
</tr>
<tr>
<td>Attack with Firearm</td>
<td>12</td>
<td>1</td>
<td>17</td>
<td>6</td>
<td>7</td>
<td>18</td>
<td>20</td>
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<td>2.8</td>
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</table>

¹ Includes use of fists, feet, head, etc.
² Includes use of clubs, boards, vehicles, etc.

* Elizabeth Croft (1985)

One possible problem when using these two existing data sources (Croft and Garner) is that they rely primarily on official use of force reports completed by police officers. Because officer’s accounts may not conform to what the citizen or a witness recalls about an encounter, these studies findings must be treated with caution.²⁶

**Seriousness of the Offense**

The situational cues that affect use of force decisions are no more apparent in any other area than the type of offense that is receiving a response. Examining almost 12,000 cases in Minneapolis, Lundstrom and Mullan (1987) found that the police reported a higher rate of police force for public disorder crimes than other index crimes. Other research has indicated disproportionate amount of force in confrontations between suspects accused of serious/violent crimes or those offenders who were evading the police in automobiles (Worden, 1995; Friedrich, 1977; Alpert, 1996). The reasons for

²⁶ Garner (1995) did cross-validate the official use of force reports used in police-citizen encounters with a sample of arrestees for whom he had data on. In this analysis, he found a surprising agreement rate. However, part of this agreement rate is based on the fact that 80 percent of the situations never involved any type of force. Thus, at this point, we really do not know how congruent officer and citizen recollections of the amount of force used in police-citizen encounters are.
this are many, though the primary belief is that such instances become such an emotional and thrilling experience where the chase places officers in a catatonic state where officers assume that the suspect must not only be guilty of a serious offense but also potentially violent (Worden, 1995; Toch, 1995; Alpert, 1996).

In contrast, Croft and Austin (1987) found use of force incidents typically involve less serious offenses. They found that of all use of force incidents in their sample, only 13.9 percent involve felony offenses and over 86 percent concerned violations where the maximum penalty is less than 1 year in a state institution. To Croft (1985) this finding is not surprising since in non-felony cases where the opponent is struggling with the officer, only physical force is authorized under law. This finding lends credence to the notion that use of force or misuse of force may not be a product of the type of incident that the individual officer is called to, but rather a “test of wills” between the officer and the potential suspect.

**Place and Visibility of Encounter**

The physical setting or social setting of a use of force incident is also an important element in the consideration of how police behave and interact with citizens. Perhaps one of the most fundamental distinctions here lies in the differences between public and private places. For example, Wilson (1968) notes that the place where a crime occurs significantly affects what the police will do about it. Rubinstein (1975) adds that when a crime or incident occurs outside in a public setting, the police are impelled to intervene because they should have done something to prevent the disturbance. The situation is less clear when the disturbance occurs in a private place. In such an instance,
law enforcement may not have been able to prevent the occurrence since it is not visible to the police without a private party’s complaint.

Further complicating the matter is the limitations on an officer’s authority to intervene in situations in private places. For example, Wilson (1968) states that an officer cannot arrest an individual for intoxication within his own home. If the officer can convince the perpetrator to step out on his doorway, the officer may then exercise his authority. Such environmental limitations are important because the place and visibility of such an encounter often determines when and how much authority the officers are allowed to impose. Thus, we are not likely to find many stop and frisk, disorderly conduct, suspicious persons, or a host of other high risk encounters within private places. Therefore, use of force incidents are most likely to occur in publicly visible places.27

Another important consideration in the treatment of citizens in public and private places may center upon differential treatment of racial minorities. Skolnick (1975) claims that minorities in public places, where there is a history of antagonism between the public and the police, are likely to be treated more harshly than other groups. Thus, Skolnick (1975) claims that racial stereotypes that may dominate and guide officer conduct in public places. However once off the street and in a private setting, the officer may lower his/her guard and deal with citizens as individuals instead of an aggregate stereotype.

Confirming Skolnick’s notion that public places are potentially more volatile places for police-citizen encounters, Reiss (1971:149), Worden (1995) and Friedrich (1977) found that approximately 75 percent of all the incidents where the police used

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27 Croft and Austin (1987) define visibility in terms of the presence of civilian witnesses.
force took place in “police-controlled” settings (patrol car, station or public places). And in 95 percent of all such encounters there were civilians present. Worden (1995) also found that force is more likely to be applied in encounters with at least 4 bystanders. Similarly, Croft (85) found that about half (53.8 percent) of all use for force incidents take place outdoors, and in plain view of the public. Of these incidents, she found that 45.9 percent occur in either a public street or sidewalk, possibly adjacent to a house or apartment building. There are also a significant number (46.2 percent) of force incidents that occur inside of public or private residential dwellings (Croft, 1985). Of these about one third occur in a citizen’s residential dwelling, county jail or inside the police station house. However there is no way to determine if potentially volatile encounters started in a public place and transferred to a private place or vice versa.

While on the surface, the location where force takes place may appear relatively unimportant, many have found that force incidents that occur in public view are the most serious for two reasons. First, these incidents are the most likely to produce feelings of discontent with police services. And second, with the possibility of civilian witnesses to corroborate allegations of “potential” brutality, the department stands at increased risk of exposure to excessive force suits. Demonstrating the number of incidents that may meet this criteria, Croft and Austin (1987) claim that as many as 49.2 percent of all force incidents occur in highly visible places. Furthermore others such as Friedrich (1977) claim that the presence of one or more witnesses may affect the escalation of force independent of other individual or situational cues. Croft (1985) found that the percentage of use of force incidents where no citizens are present is slightly smaller than non-force arrests would predict. However Croft’s findings must be viewed with caution
since her analysis is based on official use of force reports completed by officers. Therefore it is possible that officers may underreport levels of force when no witnesses are present.

As is apparent, the mere fact that a civilian may witness an incident and police actions is an important consideration in understanding how forcible situations evolve. Large numbers of people at an incident, especially those unsympathetic to the police cause, may threaten the police officer’s control of the situation and cause him to react more forcibly to regain his authority. Demonstrating the effect of a crowd, Westley, (1970) found that when a crowd of ten or more surrounded a potentially volatile scene, the likelihood of improper force increased dramatically. And Worden (1995) found that force is more likely to be applied in encounters with at least 4 or more bystanders. On the other hand, sympathetic bystanders may ease an officer’s task. This is especially important in terms of Reiss’ (1971) finding that most of the encounters where force was used were devoid of witnesses who would support the offender. Similarly, Croft (1985) found that when there are no citizen observers, the likelihood of force being used is significantly smaller than situations where citizen witnesses are present.

Number of Officers at Scene

Just as the number of civilians present at an encounter may increase the likelihood of force used, so may the number of officers at an encounter(Friedrich, 1977; Worden, 1995). For instance, Worden (1995) found that force and improper force is most likely to be applied in encounters where there are more than 5 officers. Croft (1985) found that although the police in Rochester were generally deployed in one person patrol cars, 70 percent of all force incidents involved more than one officer. Friedrich (1977) explains...
there may be two reasons for this effect. First, improper force may be more common since the officer may perceive himself to have social and psychological backing from his peers that supports the officer’s use of force to teach the suspect a lesson. Second, incidents where improper force is used are more likely to be more serious, thus attracting more than one officer. Therefore, this construct may be the effect and not the cause.

Denoting the complexity of this paradigm, Rubinstein (1975) states that a lone patrolman responding to an incident, has only “slight and tenuous control” of a situation because he is always vulnerable. Sole officers may be forced to use the tactics of persuasion to exert moral authority and not authoritarian power more so than when the officer has backup (Wilson; 1963). On the other hand, a team of officers can share responsibility and look out for each other. Thus we would expect that the safer an officer feels, the less likely he/she would be to use physical force to control an individual or crowd. According to Croft (1985) the question that remains unresolved is if the incident attracts officers or if it is the officers that precipitate force.

**Time of Day**

The time of day when an incident occurs has also been found to be an important factor in examining police use of force. LeBeau (1992) claims that time is a critical factor since crime data show that assaults are more likely to occur on weekends from twilight to early morning hours during the summer months. To date only two studies have examined the role time plays in the number and likelihood that force will be utilized by the police. Croft (1985) and Lundstrom and Mullan (1987) found that forcible incidents occur throughout the day, but pickup around mid afternoon and peak from 10:00 p.m. through 5:00 a.m. Specifically, Croft found that 82.7 percent of all use of force incidents
between the police and citizens in Rochester occurred during these peak hours.

**Socio-Economic Status and Call Frequency of Community of Melee**

Another important consideration the literature has found to affect the likelihood of the use of force is the knowledge that officers have about an individual or an area prior to their arrival on scene. It is expected that like other situationally relevant cues, knowledge of the dangerousness of a suspect, the area, possession of a weapon or any other factor that gives the officer a feel for the type of encounter that is soon to follow.

Generally speaking there has been little research effort looking at the relationship of an the officer’s perceptions of the socio-demographics of suspects within a given community. As discussed in Chapter 4, officers’ perceptions regarding either the socio-demographics of suspects or the type or number of calls within an area may not only provide clues to the officer about the type of suspects that they will encounter but also the level of resistance that is likely to be offered. It is expected that lower class areas, that have a high frequency of calls for police service will influence how the officer relates to and responds to potential suspects. While the literature remains silent on these issues, one would expect these areas to be marked by increased higher incidences of violence between police officers and citizens.

**Analysis of Situational Level Factors**

Regarding the situational level predictors of police force, the literature appears to indicate a number of situational elements tip officers off as to how officers should respond to a given situation. These “cues” as Wilson (1968) states, provide the officer with a wealth of information, based on their own experience that not only keeps the officer safe, but allows him/her to work more efficiently. The extant literature examining
the correlates of police force has found that such variables as the socioeconomic status and call frequency of area, type of building or place, suspect’s appearance, suspicion of the use of alcohol or drugs, type of mobilization, seriousness of infraction or offense, number of citizens and officers at a scene, time of call and the level of the suspect’s resistance all effect if force will be used in a given police-citizen encounter. However, it is ironic that no one has sought to get the information from the officers themselves in any systematic way to test if these variable may indeed impact on their decisions when to use force and the type of force to be used.

The models examining the relationship between these prior stated variables and officer decisions regarding the efficacy of police force are presented in Table 5.3. The data show that in situations where there are fewer citizens present, that occur early to mid-day, where a disheveled suspect is not actively resisting, officers believe that they should issue more warnings than they typically would. With regard to the appropriate level of force officers believe should be applied, the data show that police-citizen encounters that the officer believe merit fewer verbal warnings prior to using force, with actively resisting suspects are likely to be rated as deserving of a higher level of force. Similarly, based on the loading presented in Table 5.3, two situational level variables appear to influence this determination. Specifically, it appears that encounters that occur in affluent communities where there are fewer citizens present appear to be a contributing factor to an increased acceptance of higher levels of force.
Table 5.3

Multiple Regression of Situational Level Predictors and Efficacy of Appropriate Police Response

<table>
<thead>
<tr>
<th></th>
<th>Number of Warnings Issued</th>
<th>Level of Appropriate Force</th>
<th>Highest Level of Force</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>b</td>
<td>Std. Error</td>
<td>Beta</td>
</tr>
<tr>
<td>Building Type</td>
<td>.042</td>
<td>.032</td>
<td>.040</td>
</tr>
<tr>
<td>Community - SES</td>
<td>-.010</td>
<td>.026</td>
<td>-.012</td>
</tr>
<tr>
<td>Mobilization Type</td>
<td>-.039</td>
<td>.073</td>
<td>-.019</td>
</tr>
<tr>
<td>Seriousness of Offense</td>
<td>.008</td>
<td>.013</td>
<td>.020</td>
</tr>
<tr>
<td>Number of Warnings Issued</td>
<td>-.051**</td>
<td>.026</td>
<td>-.062</td>
</tr>
<tr>
<td>Number of Citizens Present</td>
<td>-.001</td>
<td>.001</td>
<td>.010</td>
</tr>
<tr>
<td>Number of Officers Present</td>
<td>***</td>
<td>***</td>
<td>***</td>
</tr>
<tr>
<td>Number of Warnings</td>
<td>***</td>
<td>***</td>
<td>***</td>
</tr>
<tr>
<td>Suspect - Dress</td>
<td>.160**</td>
<td>.010</td>
<td>.026</td>
</tr>
<tr>
<td>Suspect - Resistance Level</td>
<td>.236***</td>
<td>.014</td>
<td>.515</td>
</tr>
<tr>
<td>Suspect - Demeanor</td>
<td>-.002</td>
<td>.027</td>
<td>-.007</td>
</tr>
<tr>
<td>Suspicion of Alcohol or Drugs</td>
<td>-.033**</td>
<td>.016</td>
<td>-.070</td>
</tr>
<tr>
<td>Time of Call/Incident</td>
<td>2.294***</td>
<td>.217</td>
<td>.223</td>
</tr>
</tbody>
</table>

Model R²                           | .275| .445     | .422  |

* Denotes Significance at the .10 level. ** Significant at .05 level; *** Significant at .001 Level

The final dependent variable category represents the highest level of force that officers could conceive as reasonable. As in the two previous sections, the level of resistance and the number of warnings an officer issues are positively linearly related to the highest level of force that meets the “objective reasonableness” standard set forth in Graham. And as in the analysis pertaining to the number of warnings officers consider appropriate, officers are more likely to believe that well dressed citizens are deserving of lower levels of force than those who are not. What is interesting and quite from different than the other two models of use of force, is that the influence of seriousness of the offense and suspect demeanor surfaces only when officers are asked about the highest level of force they would consider using in a given encounter. As one would expect, officers in this sample felt that suspects accused of Part I offenses and those that were
belligerent toward the officer were more culpable and thus deserving of higher levels of coercion than cooperative suspects suspected of nuisance crimes.

One of the major questions that these data do not answer is why the same variables that predict the level of force consider appropriate do not also predict the highest level of force that officers consider reasonable. Since decisions to use force by the police is a by-product of many different aspects (or stages) of an encounter, it makes little sense to focus solely on the predictive elements either at the onset or at the point where force becomes inevitable. It is presumed that only by looking at the elements that predict the level of force considered appropriate across stages, may we have a complete picture of the elements that contribute to our holistic understanding of those elements which officers’ believe to be important in situations where police use physical force.

Thus, this chapter will use the same analytic strategy imposed in the last chapter as the analyses again address the three strength modalities. These include the conservative, liberal and loosely coupled associations. However, since the number of warnings an officer issues serves as both a dependent variable and predictor of force, if this variable acts as a significant predictor of the appropriate and highest level of force considered reasonable, it will be interpreted to fall within the conservative estimates. The models presented here for situational level predictors indicate that seven variables produce a statistically significant effect on the series of force variables. Two are considered to fall under both the conservative and liberal interpretations, and three may be construed to be loosely coupled to the concept of the reasonableness of force.
**The Conservative Estimates**

The first variable selected for this interpretation is the level of resistance (SUSPECT RESISTANCE) the suspect offers to the officer once verbal commands are issued. As shown in Table 5.3, the relationship between an opponent’s level of resistance is significant across the three dependent variables and in the expected direction. The data indicate that as the opponent’s level of resistance to the officer commands increase, the number of verbal warnings decrease. This finding is consistent with all of the major research efforts to date. Although some studies have found the demeanor of suspects to be the primary determinant of officer decisions to arrest or use force, the results from these three runs indicate that it is not the attitude of the suspect, but rather the actions taken on the part of the suspect when the officer steps in to initiate his authority. Thus it may be that prior studies have misspecified the relationship between the demeanor of suspects and officer response. This is consistent with Morales’ (1972) finding that it may not be the crime that precipitates either use or abuse of force but the test of wills between the officer and the citizen.

Closely associated with the level of resistance is the number of warnings an officer would confer upon the subject prior to using physical force. While used in this analysis primarily as a dependent variable, the number of warnings an officer would issue prior to using physical force is an integral part of any encounter where force is used. Rarely is it the case where the police use force of any type without first issuing a warning to the suspect to desists from a prohibited behavior.  

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28 This may not apply in all cases. Specifically those cases when either the life or well being of the officer or other citizen in placed in serious danger.
the NUMBER OF WARNINGS only applies and is significantly related to the two predictors of the level of force, one could argue that the shear strength of this variable should allow us to be reasonably confident that this relationship is strong and would withhold even the most conservative of tests. Thus, one would expect further research to find that the number of warnings an officer issues to be related to the level of force an officer feels is appropriate regardless of the method or analytical method employed by the researcher.

**The Liberal Interpretation**

Adopting a more liberal interpretation of the significance of situationally based predictors, two additional variables were significant in the 2 regression equations. These variables include the number of citizens present and the dress of appearance of the suspect. Looking at Table 5.3, these data appear to fit the pattern well. The operationalization of the NUMBER of CITIZENS indicate that when more citizens are present at a scene, officers on the average are willing to issue more warnings prior to using actual physical force. And when force is applied, the level deemed appropriate is significantly less than when the encounter evolves in relative isolation. Interestingly, the number of officers at the scene did not withstand statistical testing at any level.

Also important is the suspect’s appearance or dress (SUSPECT DRESS). Generally, the literature has found that the appearance of a suspect may provide an officer with special clues about the individual, and specifically how much force (either verbal or physical) may be necessary to gain compliance. It is commonly thought that those whose appearance may be construed as less desirable may be more likely to not only have force used against them, but higher levels of physical coercion. These data
partially confirm these notions and find that suspects whose appearance may be classified as rumpled or messy appear to be more likely to receive fewer warnings prior to officers using physical force. However, when officers evaluate the highest level of force appropriate for a given situation, this level is rated significantly lower than for those clients whose appearance is classified as “clean and neat.” While this relationship does not hold for the level of appropriate force, the direction of influence remains the same. Thus, one could infer that officers responding to situations where they are forced to encounter those that may be down on their luck (such as the poor, homeless, mentally ill) may feel more empathy for them than others who should be perceived as being or knowing better. Alternatively one may conceive of this relationship in the light that officers do not feel that these people are deserving of their time or energy, and therefore they may refuse to engage these individuals as they would others.

The Loosely Coupled Suggestions

The third tier of findings in this section detail the effect of three situational predictors on the number of warnings to be issued prior to using physical force, the level of force considered most appropriate or the highest level of force that could be construed as reasonable. Again, in this interpretation a variables may be statistically significant in only one of the three regression equations. These variables include the officers’ perceptions of the community (COMMUNITY SES), the seriousness of the prescribed event (SERIOUS OFFENSE) and the time of the call (TIME CALL).

Just as the individual appearance of a potential suspect appears to influence the decisions of how to intervene with citizens, so may the officer’s perceptions of the socioeconomic status of the community in which the incident occurs. As Wilson (1968)
alluded to in his early work on police discretion, the level of force or effort utilized by
police officers may be related to special cues from prior experience with citizens or the
community. However, the direction of this relationship is currently unclear. It may
follow that officers may view the level of force deemed appropriate to be higher in areas
of greater economic need. However, a competing hypothesis may also be viable, namely,
that officers may feel that misbehavior in higher class areas needs to be met with higher
levels of force in order to satisfy the constituency and maintain public trust (Black, 1976).
These data seem to support Black’s notion that the level of force deemed appropriate is
positively linearly related to an officer’s perception of the social class of an area, and
conversely the individuals within that area. Thus, officers in this sample seem to agree
that the level of force deemed appropriate for occurring in upper class areas is higher than
those in lower class areas. However, this relationship did not hold for either the number
of warnings or the highest level of force perceived to be reasonable.

The second and arguably most researched situational factor within the loosely
coupled group of findings is the seriousness or nature of offense (SERIOUS OFFENSE)
that the officer confronts.29 Currently the literature is split concerning the type of offense
or offense category where force is most to occur. Two of the latest studies have found
that public disorder crimes such as disorderly conduct, domestic violence and aggravated
assault are the most common offenses where the police use force.30 However, as many as
nine studies have found that it is the serious and violent offenses that not only raise the

29 For a complete listing of sources see Table 5.1 “Summary Figure the Extant Literature’s Findings of Situational
Level Correlates Relating to Police Behavior” earlier in this chapter.

30 These studies have found that those offenses which involve public disorder and are likely to draw the attention of the
public are the most likely to be dispersed with force. Models were tested using different types of offenses as dummy
guard of the police but influence if and when force will be used (Alpert, 1996; Black and Reiss, 1970; Croft and Austin, 1987; Friedrich, 1977; Lundman, Sykes and Clark, 1978; Lundstrom and Mullan, 1987; Reiss, 1967; Reiss, 1971; Sykes and Clark, 1975; Sykes, Fox and Clark, 1976; Worden, 1995).

Table 5.3 shows the effect of the seriousness of the offense across the three variations of the dependent variable. While the effect appears to be a fairly stable correlate in the extant literature, it is interesting that the seriousness of the offense was only significantly related to the highest level of force that police would deem as appropriate. This finding lends credence to the notion that the color and exercise of law is more a result of the interplay between the officer and suspect than some of the legal and extra-legal factors that were once thought to play a critical role in determining if force was used, and how much was either necessary or appropriate.

Another finding within the loosely coupled level of associations centers around the time of day that a call occurs. As predicted by the literature, these data indicate that time is indeed a factor in determining how fast officers will resort to using physical force to resolve a police-citizen dispute. Thus, as the day progresses from dawn through the hours past midnight officers are more inclined to issue fewer warnings prior to using physical force. One of the primary reasons for this relationship centers upon the notion that potential suspects in the late and early morning hours are more likely to resist at higher levels. Or it may be a combination of time of day and the imposition of another situational variable that introduces itself at these times, the suspicion or actual

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variables which pitted such offense as disorderly conduct, domestic violence and aggravated assault versus all the other offense. However, these relationships did not hold across any of the levels of force.
consumption of alcohol and/or drugs. Such interactive effects are not examined here, but will be reserved for future research endeavors.

Plausible explanations for why the relationship involving time of day and the level of force that may be condoned does not hold across the other two levels of the dependent variables are numerous. It may be that the time which a call occurs really doesn’t directly influence an officer’s perception of the level of force that a situation may call for. But time considered in conjunction with other relevant variables (i.e. alcohol or substance use, type of offense or suspect) that are likely to occur concurrently in the hours after dusk may effect how officers deal with citizens. Or it may be that the influence of time only distinguishes itself during the peak hours of the day when officer’s time is at a premium. If one accepts this notion, one would expect to find officers ranking the highest and most appropriate level of force considered appropriate to be highest when their call volume is at the highest. Under this conceptualization, the appropriate and highest amount of force considered reasonable should be higher in the morning or evening rush-hour traffic. An independent t-test was calculated to examine this supposition. The results of this run indicate that only the number of warnings an officer would issue was statistically different from all other hours of the day (T=1.88 P=.060). However, this effect was weak and significant only at the .10 level. And when the hours from 12:00 am. to 3:00 a.m. were included in the group, this effect disappeared. These findings lead us to believe that the independent effect that time has on officers’ perceptions of the level of force deemed as both reasonable and appropriate may be mediated by the effect of other contextual elements such as alcohol or drug use, community SES, and potentially the number of citizens at the scene.
Summary of Situational Level Factors

Before any concluding remarks can be drawn from the study, it must be acknowledged that this study is limited in that it only represents a sample of officers that are predominately from small to medium sized departments. While there are some indications that this sample may be typical of the majority of police departments across the nation, it may be proper to generalize these findings to use of force situations in the nation’s larger urban centers.

While the models presented in this paper are important for the relationships they confirmed, the real importance of this effort may lie in relationships that are commonly held amongst those who study police force. As shown in the preceding chapter, these data seem to question many of the common assumptions that we would make regarding how law enforcement officials regard the efficacy of the use of coercive force. The notion that only the level of resistance offered by the suspect and number of warnings issued by the officer meet our conservative criteria, suggests that in the most strict sense, for predictors in the situational arena only the interplay between officers and suspects should be applied to determine the “reasonableness” of an officers forceful behavior. For city government workers, law enforcement officials and police trainers, this is good news. Since these elements can be readily addressed through standard police training modules and techniques.

However, when you adopt a more liberal model of officer’s perceptions of the appropriateness of the level of force that may be reasonably applied, other extra-legal factors begin to enter the equation. Situational variables such as the number of citizens present and the appearance of the suspect complicate this already muddied water. The
model and data presented in this chapter suggests that the support or antagonism that goes along with a crowd of people view a police-citizen encounter or the effect that the appearance of a suspect’s clothing has, is clearly not within the domain that law enforcement training can easily address. While these factors may provide to the officer a series of clues regarding what the profession feels is appropriate police force, the simple truth is that no matter how much training an officer receives or how “professional” an agent of the state is, we may never be able to completely eliminate the effect of the human or emotional side of coercive force.

Regarding the findings for the loosely coupled suggestions, the interpretation becomes much more difficult. While we can not completely disregard these effects as simple spurious associations nor claim that these relationships are caused by measurement error, we must be extremely cautious not to assign to much weight the measures of community-SES, seriousness of offense and time of call simply because of their instability across the three domains of force. Although simple histograms of the distribution of scores illustrate that these factors were randomly selected, it may be that the extant literature misspecified the direct relationships these factors have on the likelihood that force will be applied in a given police-citizen encounter. If this supposition is true, then a search for interactive effects would benefit the field in order to better understand situations where force may be used. This search for interactive effects will not be undertaken in this work, but will be reserved for a later date.

The next chapter will address three purposes. The first will look at the clustering of variation in both a multi and bivariate context of officer responses to the range of force chosen as appropriate for the encounters presented to the officers. This analysis will also
provide insight as to the points or categories in the independents variables that exert consider influence to these findings. Second, it will present a final model by which a standard may be established. This model will be divided by the gender of the suspect, so that the range of values that officers’ feel is appropriate can be easily interpreted. It is expected that this model will serve as a guide for officers, police trainers and the courts to assess if the level of force used by an officer in a given situation exceeded that which the profession deems as either appropriate or reasonable.
Chapter 6

Inter-Category Variance and the Final Model

Introduction

The primary purposes of the last two chapters was two fold. First, this study presented the individual and situational correlates the extant literature has found to effect officers decision to use force. Second, this work tested the effect of these variables in relation to officers’ perceptions of the level of force that they consider reasonable. While some of the relationships were confirmed using either the conservative estimates or liberal interpretations, many others factors were found unrelated to the three domains of police force. The foremost conclusion as to why these variables were not statistically significant, is that their effect was masked when compared to the other included independent predictors. This supposition is bolstered by the underlying principle that the factorial method is designed to provide researchers with the ability to clearly identify and separate the influences of many factors regarding a complex social phenomenon (Rossi and Knock, 1982). Thus, if these findings are generalizable to other officers across the country then the key elements that trigger the perceptive judgment of officers’ definition of the reasonableness of force lies most predominantly in the conservative and liberal criteria discussed in the previous chapters.

As shown by the estimates in Table 5.3 and in a limited fashion in Table 4.3, there appears to be some internal consistency shown by the respondents concerning the efficacy of forceful behavior. This consistency manifest itself by the fact that some of the individual and situational level variables (those comprising the conservative estimates including the number of warnings an officer would issue prior to using physical force,
level of suspect resistance and the gender of the suspect) consistently explain some significant portion of the variance in the levels of force that officers’ believe should be applied. This chapter will be split into three unique sections concentrating on those factors and advance our understanding of these relationships by examining the unique effect of shifts in the values of these predictors in both a multi and bivariate context.

The first section is comprised of a table denoting the coefficients of variation (CV) for the cross-classified independent variables that produce a linear additive effect on the number of warnings an officer would issue prior to using force, the appropriate and the highest level of force considered reasonable. The estimates that comprise this matrix will be categorized by the gender and level of resistance the suspect presents to the officer. The coefficients presented in Table 6.1 are presented in matrix format so that orthogonal comparisons can be made, concentrating on the variability of these scores around their distributional centers.

By having these estimates arranged in a matrix, cross category comparisons can be made assessing the normalized variation across the domains of force in each category of the included independent variables. While primarily a descriptive exercise, these comparisons can denote a second tier of consistency, taking into account the effect of the other independent variables across both the number of

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31 While the variable representing the number of warnings an officer would use prior to using physical force in a police-citizen encounter will be interpreted as a situational level independent variable later in this chapter, it was thought that its inclusion here as a dependent variable would assist this analysis in two ways. First, it would help ground the work in the prior to two chapters of this analysis on the internal consistency amongst responses. And second, it would add strength to assessing the predictive power of the principal independent variables on what situations officers feel may present more danger to the included actors.

32 The coefficient of variation (cell std deviation/ cell mean) was chosen principally because it is difficult to interpret standard deviation values directly when pairing values of different scales. Having already found the mean values differ, through the use of ordinary least square regression techniques, the coefficient of variation (often referred to as the coefficient of relative variation) is used to give a better estimate of the variation around a mean score since it is in essence a normalized average of the squared deviations around a mean.
warnings an officer would issue prior to using force and the two domains of physical force.

In order to gain a better understanding of these relationships between the independent and dependent variables denoting the actual level of physical coercion that may be construed as either appropriate or reasonable, the second section of this chapter will examine the inter-category variation of the cell estimates bivariately using a series of box-plots denoting the median, inter-quartile range and the minimum and maximum range for outliers.\(^{33}\) While some would question the choice to only examine these relationships bivariately, it must be remembered that according to the basic design of the factorial method all other independent variables not only were randomly selected, but systematically controlled for. Thus, it is expected that these comparisons will allow for further examination of how changes in level of the independent variables effect the rating of the level of force that officers believe to be both reasonable and appropriate.

The third section will apply what was learned from Chapters 4 and 5 regarding the principal determinants of the efficacy of officers’ determination of the level force suitable to each unique encounter. In order to develop a reliable model of predictors, the ensuing analysis consist of those factors that withstood tests of significance for the dependent variables denoting the levels of physical force considered as both appropriate and reasonable. This set of variables will be referred to as the “principals.”\(^{34}\)

\(^{33}\) In this section, the number of warnings will be used as an independent variable and stand as a proxy variable for the officers’ perceived level of threat either to him/herself, the suspect or others in the immediately surrounding area. It is hypothesized that this dimension takes into account totality of the circumstances as presented by the situation to the officer and allows for at lest some objective measure of their discretion.

\(^{34}\) While it is apparent that the same variables represented by the “principals” are those that were previously referred to as the conservative estimates, membership in the previous group was not grounds for inclusion. Should an independent variable in the previous chapter have only been associated with the appropriate and highest level of
Having established in the last two chapters that the gender of the suspect is a key factor in determining how much force officers feel should be used, this table will present separate models for male and female opponents denoting the predicted point estimates of physical force that officers feel may be reasonably applied. It is expected that this final model will serve as a guide for law enforcement agencies, administrators and the courts to use in assessing the reasonableness of any officers’ conduct who is accused of using a level of coercion that may be considered out of the profession’s normative boundary.

**Data Clustering Among the Principal Estimators**

The examination of the variation within the categories of the independent variables to assess the amount of internal consistency across the indicators is an essential element in this enterprise. While the factorial method allows researchers to identify key variables or those factors that influence decision making, their identification is simply not enough. Since we are interested in determining if it is possible to develop a standard by which officers can judge the reasonableness of their own conduct, further examination is required to assess the internal consistency in their responses across categories. This cross-classification analysis allows for the pinpointing of those categories of variables where there is a consensus (or lack thereof) in officers’ responses to these unique police-citizen encounters.

**Multivariate InterCategory Variation Matrix of Coefficients of Relative Deviation**

Before this table is presented, it must be explained that a decision was made here to keep our original conception that the number of warnings an officer would issue prior

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force it would have been included. However, none of the variables that met the criteria for inclusion in the liberal interpretation was linearly associated with both of these variables.
to using force as a dependent variable, since what we are interested in illuminating in this table is the determinants of officer responses to the context of a situation. In this case, since we are primarily interested in the either the individual attributes or situational correlates of the behavior of the suspect, the addition of an action variable on behalf of the officer would only confuse the central purpose of this table. Thus, this table answers the question “How much variation in officer responses is there, given the gender of the suspect and the level of force that is applied against the officer.” Thus one should interpret this table as an extension of the previous analyses, adding an examination of the dispersion (or in this case variation) across the dependent variables within categories of suspect gender, and resistance. By constructing the analysis in this way, we are able to assess in a multivariate sense where these consistencies are, and the unique effects of the individuals’ attributes or actions on what officers’ feel the appropriate force response should be.

Illustrated in Table 6.1 are the coefficients of variation presented in a multivariate context of each unique category of the variables that comprise the principal estimates. As mentioned previously, the coefficients in each cell represent a standardized estimate of the spread of the distribution around the mean of the selected dependent variable. While there is no way to quantitatively state that one cell’s distributional spread is greater than another, what can be described is the general, aggregate pattern of a series of cell scores compared to others. That is, one can say that the average relative variation scores for the level of force deemed appropriate is different for males than for females. And in this table, it appears that there is greater variability in the estimates when officers confront female suspects, as opposed to males.
Table 6.1
Intercategory Variation of Levels of Force
Considered Appropriate for the Conservative Estimates

<table>
<thead>
<tr>
<th>Suspect Level of Resistance</th>
<th>Number of Warnings Issued</th>
<th>Coefficient of Variation</th>
<th>Highest Level of Force Reasonable</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Female</td>
<td>Male</td>
<td>Female</td>
</tr>
<tr>
<td>Passive Weight</td>
<td>.401*</td>
<td>.291</td>
<td>.462</td>
</tr>
<tr>
<td>Pulls Away</td>
<td>.299*</td>
<td>.274</td>
<td>.627*</td>
</tr>
<tr>
<td>Pushes Away</td>
<td>.350*</td>
<td>.339</td>
<td>.547*</td>
</tr>
<tr>
<td>Push-Pull Match</td>
<td>.371*</td>
<td>.263</td>
<td>.579*</td>
</tr>
<tr>
<td>Squares Off</td>
<td>.419*</td>
<td>.319</td>
<td>.523*</td>
</tr>
<tr>
<td>Punching &amp; Kicking</td>
<td>.341</td>
<td>.397</td>
<td>.580*</td>
</tr>
<tr>
<td>Chokes &amp; Gouges</td>
<td>.212</td>
<td>.212</td>
<td>.388</td>
</tr>
<tr>
<td>Eyes</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Grabs Firearm</td>
<td>.173</td>
<td>.173</td>
<td>.340</td>
</tr>
<tr>
<td>Produces Weapon</td>
<td>.234*</td>
<td>.207</td>
<td>.447*</td>
</tr>
<tr>
<td>Totals</td>
<td>.379*</td>
<td>.321</td>
<td>.651*</td>
</tr>
</tbody>
</table>

* Indicates that the relative variation around the mean is greater for females than for males.

Keeping with this line of argument when looking across the matrix, it is evident that in 18 of the 27 (or 66.7 percent) combinations comparing the coefficients of variation of police-citizen encounters across the three levels of force, the coefficients reveal that officers in this sample appear to be better able to reach a consensus of opinion when they confront male rather than female suspects. That is, the responses of officers to the included vignettes were less dispersed and more centered around the mean than in instances where the suspect in the vignette was male. This pattern is consistent across the three measures of police force. Specifically, within each of the three dependent variables, 6 of the 9 (or 66.7 percent) different cells pertaining to the level of suspect resistance contained coefficients that were higher for females than for males. While these findings are important, probably more important is where or at what level of resistance these consistencies distinguish themselves.
Looking at the columns denoting the three measures of the dependent variables, the data consistently show that officer opinions concerning the number of warnings officers feel should be issued, the level of force considered appropriate and the highest level of force considered reasonable are more consistent for males at the lower end of resistance (passive weight-punching and kicking) than when suspects are actively resisting to the point where their behavior may injure officers. In cases where the suspect begins to choke or gouge at the eyes of an officer, the variation scores stabilize and appear to be similar for both males and females up to the level where a suspect reaches to grab an officer’s weapon. At this level, there is less variation (and more consistency) in the possible responses for female suspects. It is thought that this pattern of reversal may be caused by the suggestion that officers may feel that an “unarmed” female suspects may pose less of a threat or are deserving of a more limited range of force alternatives than males. This effect is thought to be primarily driven by the less imposing physical stature of females. Thus, if women are perceived to be less of a threat, then it would follow that the range of possible police responses should be limited. However, one when examines the highest levels of resistance, where there is not only the perception of a threat but the subject is actually attempting to mortally wound an officer variation in force alternatives resurfaces.

It is thought that this variation at the highest levels of resistant for female suspects is a product of the uncertainty of the intent of female suspects in the eyes of the officers responding to a scene. While Defeur (1975) found that police officers generally tend to treat women who display certain sex-role behaviors more leniently, women who act in an aggressive or hostile manner are often labeled as uncooperative and are thus more likely
to be arrested. Additionally, further research has suggested the police officers are reluctant to arrest (and by default use force) because women’s behavior is often considered unpredictable and because coercion as a means of controlling females in contrary to cultural norms (Bayley and Mendelsohn, 1967; Niederhofer, 1967 and Rubinstein, 1973). Thus male police officer may extend preferential treatment to women but expect women to behave in certain ways. This chivalrous treatment may be withdrawn when women violate norms appropriate for female conduct by actively resisting an officer’s orders.

_Bivariate Intercategory Variation Among the Principal Estimators_

Having established in a multivariate context that there is on average, less stability (or internal consistency) in the officers’ opinions regarding how they should resolve a potentially violent encounter with female suspects, some benefit may be gained by examining the bivariate relationships between the principal independent variables and the two dependents variables that determine the range of physical force alternatives that are appropriate. Since we are interested in developing or illuminating a “standard” by which the profession can assert the reasonableness of forcible behavior, it makes little sense to solely examine the number of warnings an officer would issue prior to using physical force as a dependent variable. Instead, this chapter reconceptualizes the role that this variable plays in situations where force is used. Where this variable is used as a dependent variable, the parameter represents how fast officers resort to physical force. However as an independent variable, it can stand as a proxy for the potential threat imposed by the situation or actors to either the officer, a victim or those in the immediately surrounding area. Thus, if there is in fact an immediate threat to one of the
actors in the melee, one would expect that the officer would be less willing to verbalize
his/her wishes to the suspect, in hope that the suspect would cease with a prohibited
behavior.

This reinvention of the utility of asking officers how many warnings they would
give a suspect before using physical force is a useful tool to assess the perceived
volatility of a situation. Thus in this section and the ones following, when the variable
representing the number of warnings an officer would issue prior to using force is used as
an independent variable, its interpretation will change slightly to capture the danger and
potential threat imposed by the totality of circumstances presented to the officer. In order
to prevent confusion, when this variable is used as an independent factor it will be
referred to and labeled as THREAT. The variable (THREAT) will be positively coded
from 1 to 5, with each additional level representing an increase in the need for immediate
action by the officer.35

Gender of the Suspect

With regard to the individual level factors that the extant literature has found to
effect the likelihood that force will be applied, only one variable withstood tests of
significance. As indicated in the previous two chapters, the parameter estimates for
SUSPECT GENDER, indicates that officers are likely to perceive that male suspects are
likely to be rated as recipients of higher levels of force than females at either the
appropriate or highest level considered. The estimates from Table 5.3 indicate that males
are likely to be perceived as deserving of one half to three quarters of a level of force
higher than when females are potential opponents. While this finding is consistent with
the extant literature which states that police rarely use any more force than necessary in resolving conflicts with female suspects, what is not known is if this opinion or effect is shared across all respondents. That is, at this point in time, we have no way to assess the variation in officers’ beliefs that the gender of the opponent should account for the composition of a separate standard of care.

There are many ways to measure the variability or internal consistency of opinions, in the social sciences. Weisberg (1992:3-4) claims that decisions to use one statistic above another is based primarily on 15 factors. A brief example of these factors include the unit of measurement, the ease in which the statistic can be calculated, how robust a statistic it is, if it is simple and comprehensible, resistant to outliers, equal to actual data values and efficient compared to other possible estimators.

Because the values we be assessing in these data are primarily ordinal, it makes little sense to try to normalize a score of variability by dividing it by a measure of central tendency which in the most strict sense, is not appropriate for these data. Should we describe the spread by using the standard deviation, mean deviation or other mean variants, we may just be exaggerating the problem of our lack of a true metric.

Weisberg (1992) claims that the best ways to discuss the variation in scores when using ordinal data is to look at the spread (or range) of values associated with each individual question. The range as measured as the highest value-the lowest score for a given response denotes how much the variable varies in practice. However, the range is sensitive to extreme scores and may not be very useful to researchers if the topic in question involves a greater degree of refinement. The sensitivity of the range to the

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35 The proxy variable representing the level of THEAT of a situation to the officer is coded from 1-5, such that officers
effect of extreme scores is most easily remedied by switching to the interquartile range. This measure is determined by computing the actual scores the present the 75th and 25th percentiles and subtracting the larger from the smaller. This value not only eliminates the effect of extreme scores but is less sensitive to outliers and is a more resilient measure of variation or ordinal variables. The scores that fall within this range are illustrated by the area enclosed in the box in Figure 6.1.

As shown in Figure 6.1, there is more consistency in the responses for officers ratings of the level of force deemed appropriate for a given police-citizen encounter when the suspect is a female. That is, using only bivariate comparisons of the level of force considered appropriate and the gender of the suspect, officers in this sample appear to have a greater consensus of opinion with regard to the level of force that should be applied when the suspect is female, as opposed to when the suspect is a male. For female suspects, the range of scores represented by the middle 50 percent of responses perceptions of higher levels of force should be positively related to the potential seriousness of the encounter.
considered only the defensive tactics of joint manipulations or pressure point maneuvers through the application of chemical agents or an electrical device. For males, the starting point remains the same, however the upper end of this range extends one level higher to include empty handed, punching, striking or kicking.

For the highest level of force considered reasonable, the pattern is reversed. In this case, when the encounter involves a male suspect, the scores for the highest level of force considered reasonable level are less dispersed and more consistent, than when a male suspect is involved. This reversal of the pattern displayed should be no surprise in light of the previous sections suppositions that officers evaluate the highest level of force they would use with regard to the potential threat imposed by the suspect and the thresholds of force that officers feel may be necessary to subdue opponents who may be perceived as less physically threatening. As applied here, since the interquartile range consists of a smaller range of scores, it is clear that officers view males as more able opponents and thus consider them to be the likely recipients of a more restricted (albeit higher) range force alternatives.

These findings denoting a difference in the internal consistency amongst the respondents when confronting suspects of different genders must be treated with some caution. Subsequent analysis of the shape and dispersion of the distributions by using the Wald-Wolfowitz test for ordered pairs reveal that there is only a significant statistical (Z=2.63) difference between the distributions across male and female suspects in the domain denoted by the level of force considered appropriate.\(^{36}\) While the difference in the

\(^{36}\) The Wald-Wolfowitz test assumes that the variable under consideration is continuous, and that it was measured on at least an ordinal scale (i.e., rank order). The Wald-Wolfowitz runs test assesses the hypothesis that two independent samples were drawn from two populations that differ in some respect, i.e., not just with respect to the mean, but also with respect to the general shape of the distribution. The null hypothesis is that the two samples were drawn from.
distribution for male and females approaches significance for the highest level of force
\(Z=1.33\), further analysis may be required before claims are made enumerating these
differences.

Level of Suspect Resistance

The second set of relationships that meet the criteria necessary to fall within the
principal estimates is the relationship between the level of resistance offered by the
suspect and the domain of the appropriate and highest level of force considered
reasonable. As illustrated in Figure 6.2, the uniformity among responses between the
level of suspect resistance (SUSPECT RESISTANCE) and the level of force that could
be considered appropriate, appears to be quite stable and low at the lower tiers of
resistance (up to and including a push-pull match). At this lower level, the middle 50
percent of the responses are on the average within 1 level of each other. However, the
range of values within the interquartile range climbs to two to three times that level when
the suspect begins to shown some signs of active resistance (squares off - punching and
kicking) through situations where the suspect appears intent on inflicting on the officer
serious bodily harm.

One of the most interesting patterns of the consistency scores is the officers
ranking of the highest level of force they would consider reasonable. Unlike the scores
for the level of force they consider appropriate, there is more variation in responses
concerning the highest level of force considered at the lower end of the suspect resistance
set. Here the relationship peaks as a suspect resists using only the weight of their body,
levels off and then diminishes down to a differential score of one as the suspect actively

the same population. In this respect, this test is different from the parametric t-test which strictly tests for differences
pursues with the intent to cause bodily harm. This relationship behaves as expected if it is indeed true that officers’ responses to individual action is determined primarily by the level of resistance they present. Thus, we would not expect a wide variation in the estimation of the efficacy of officer behavior as the situation becomes more serious to officers and those in the immediate surrounding area.

Figure 6.2

Box Plot of Level of Force Considered Appropriate by Level of Suspect Resistance

Median; Box: 25%, 75%; Whisker: Non-Outlier Min, Non-Outlier Max

Threat Imposed by Encounter

The third variable that meets this criteria is the officers’ estimation of the immediacy of action. As shown in Figure 6.3, there is a positive linear relationship between the threat or volatility of an encounter and the levels of force deemed both appropriate and reasonable. What is most interesting about this relationship is the internal consistence (i.e. lack of dispersion) amongst officers perceptions concerning the efficacy of forceful behavior in the center of this distribution. This is shown pictorially by the small range of scores denoted by inter-quartile range among Level III threats across the
two dependent variables. Thus among those situations defined as composing a Level III threat, there appears to be a congruency of answers concerning the amount of force they would use. It may be that older officers, those with more experience in dealing with citizens in medium to average risk encounters or those that have received more training in force alternatives, are more capable of dealing with resisting suspects in ways that require minimal amounts of force.

This supposition was tested using an independent sample t-test comparing only those officers who classified the unique encounter they were presented to be of average risk (or Level III) against all other respondents. The subsequent analysis confirmed that this group did not significantly differ from the other officers in terms of the number of hours of community policing training, hours of defensive tactic training in the previous year, the number of physical confrontations or the number of times they were injured in physical confrontation in the past year, if they were training in verbalization techniques, years of service, their age or the size of their department.

Examining the dispersion of answers across the other categories denoting of the potential threat of an encounter, the congruence soon disappears. This is especially true in the relationship between the determination of the level of force they would consider appropriate, when officers perceive the situation to be the most grave. As can be seen in Figure 6.3, the not only is the range of scores smaller in situations that officers view as a Level V threat (or the most serious type of encounter) but the range of scores that constitute the interquartile range is 40 percent smaller when officers are asked to estimate what the highest level of force they would use, compared to the level of force that could be considered most appropriate.
By only using bivariate comparisons, it is hard to state any concise explanation for why there is such a drastic difference in the range of values in situations that officers consider the most serious. It may be that officers are generally willing to try lower levels of force to coerce the suspect into compliance, but recognize that since human behavior is often unpredictable, the use of more drastic and risky measures should remain a viable option. Or it may be that this lack of conformity amongst responses is caused by suspects using higher levels of resistance. However, when one looks at the consistent patterns amongst the highest level of force considered reasonable, internal consistency returns.

Figure 6.3

Overall, the previous two sections have demonstrated that officers’ believe there is more variability in the level of force that police officers should use when a resisting suspect is female as opposed to male. The variability scores were denoted by the difference in the coefficients of variation in a multivariate context in Table 6.1 and in a limited way in the bivariate box plot presented in Figure 6.1. Similarly, Figures 6.2 and 6.3 illustrated the importance and relative influence of differing levels of resistance and
the perceived threat imposed by the totality of circumstances on the level of force that
officers in this sample rated as appropriate and the highest level considered reasonable.

Thus, the question that needs to be answered is whether there is, or should be, two
standards considering the level of resistance and general overall threat imposed by the
situation, that officers should follow depending on the gender of the suspect. Intuitively,
the answer should be no. For nowhere in the standard set forth by the Supreme Court is
there a mention that the efficacy of forceful behavior should be guided by any individual
level variable including the gender of the suspect. However, these data indicate that at
least for officers in this sample, there are two standards. For this reason, the final model
presented in the next section will be split by the gender of the suspect. Having already
presented that the gender of opponents makes a difference in how officers respond to
these potentially volatile situations, the presentation of the model may be applied and
understood more easily if the models are split into separate analyses of male and female
suspects. Thus each model will be presented the partial coefficients of denoting the point
estimate for the appropriate and the highest level of force that may be considered
reasonable. To answer the question of whether the effects of the variables presented in
Table 6.2 differ significantly, I will present in the last column of each model the t-values
from the test of the equality of coefficients for each factor across the two equations.\textsuperscript{37}

This test will provide insight as to whether or not the effect of each coefficient is indeed
stronger in situations where the suspect is either male or female. If the t-test coefficient
is negative, the relationship is stronger for males. And conversely, positive values denote

\textsuperscript{37} The t-test used in Table 4 to test the equality of coefficients across the two equations is provided by Kleinbaum and
a stronger association for females. These models denoting this standard is presented in the following section.

**The Final Model**

The data presented in Table 6.2 represent the parameter estimates, standard errors, standardized regression coefficients and a t-values for the equality of coefficients for the final model. This table is comprised of models for male and female suspects predicting both the appropriate level of force officers feel should be used, and the highest level of force that could be considered reasonable. The findings in this table are consistent with the current literature being conducted on this topic. That is, the level of force that should be considered as either reasonable or appropriate should be determined only by elements inherent in the interplay of officers and citizens. This being the case, it is obvious that many of the extra-legal factors that previous studies have found to be correlated with the use of police force, are not related to officers’ determination of the level of force that should be used. The statistical power of these models determining the level of force that should be applied is quite compelling. For males, the model explains between 49 to 43 percent of the variance in the two dependent variables. While for females, the model is less efficient (variance explained 35-37 percent) but still produces an effect that most social science research strives to achieve.

The relative absence of extra-legal factors in the final model is of considerable note since it removes issues of the race and social class of both the officer and the suspect from consideration. Having these elements removed from such an equation allows the field to move forward in assessing the situational factors that are likely to produce an increased acceptance of forceful resolutions.
As shown in Table 6.2, only three elements appear to significantly effect officers’ perceptions regarding the efficacy of their forceful behavior. These three include the gender of the suspect, the overall threat to either the officer or others nearby as generated by the immediacy of action for each situation, and the level of resistance displayed by the suspect. As shown earlier in this Chapter and in Chapter 4, the only individual level variable that withstood test of significance was the gender of the suspect. Thus it may be that police officers in this sample use different criteria in their force decisions for male and female suspect. It was supposed that female suspects would pose less of a risk to officers because they would likely be perceived to be less physically threatening than males. This effect was found to hold at both the appropriate and highest level of force.

However, the model presented in Table 6.2 offers some interesting insight into situations where officers are asked to evaluate the highest level of force they would use against female suspects. These data indicate that the officers in this sample may choose to use higher levels of force against females, then males in situations when the officers’ believe there to be an imminent threat either to themselves or others in the general vicinity.
Table 6.2
The Final Model Representing the Principal Predictors of the Level of Appropriate Police Response by Gender of Suspect

<table>
<thead>
<tr>
<th>Independent Predictors</th>
<th>Appropriate Level of Force</th>
<th>Highest Level of Appropriate Force</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Males</td>
<td>Females</td>
</tr>
<tr>
<td></td>
<td>b</td>
<td>Beta</td>
</tr>
<tr>
<td>Suspect Level of Resistance</td>
<td>.516*</td>
<td>.425*</td>
</tr>
<tr>
<td></td>
<td>(.035)</td>
<td>(.042)</td>
</tr>
<tr>
<td>Immediate Threat Imposed by Determinants of the Encounter</td>
<td>.425*</td>
<td>.224*</td>
</tr>
<tr>
<td></td>
<td>(.080)</td>
<td>(.087)</td>
</tr>
<tr>
<td>Constant</td>
<td>-.086</td>
<td>.379</td>
</tr>
<tr>
<td></td>
<td>(.263)</td>
<td>(.260)</td>
</tr>
<tr>
<td>Model R²</td>
<td>.49</td>
<td>.35</td>
</tr>
<tr>
<td>Standard Error of Estimate</td>
<td>1.63</td>
<td>.67</td>
</tr>
</tbody>
</table>

* All Predictors in this model are significant at the .001 level or less (P<.001)
- Standard Errors for coefficients are contained with parentheses
- T-value used in this table is the t-test for differences of coefficients across equations provided by Kleinbaum and Kupper (1978:99-102)

Regarding the level of resistance of the suspect, the coefficients reveal that as the resistance of the suspect increases one level, the officers’ perceptions of the level of force that should be issued increased approximately from one-half to one-third a level. This effect is true across gender categories such that males who resist more actively are more likely to have increased levels of force used against them compared to females. It is also worth noting that the strongest predictor of both dependent variables in each equation, is the level of suspect resistance.

While the resistance offered on behalf of the suspect is a critical element to be considered when assessing how much force officers should impose in a given situation, another key element in this interplay between officers and citizens is the actual or perceived threat that a situation extrudes. That is, how serious is a situation and does it or the actions of the opponent require immediate action. The models presented in Chapter 4 and 5 denoting the significant predictors of the number of warnings an officer should
issue prior to using force is an important base which to start assessing the elements make up show that the nature of seriousness of the encounter, what the addition of this variable as an independent variable adds is a construct denoting those terms that make up an officers’ discretionary choices as when to invoke the law and how much to apply.

The coefficients presented in Table 6.2 indicate that for the appropriate level of force that should be applied, the determinants that compose the level threat that a situation invokes appears to be about 73 percent as powerful of a predictor of force for males than for females. However, when explaining the highest level of force that could be applied, the threat level of an encounter is more than twice as powerful for females than for males. The reason for this reversal is unclear. It may be that officers’ believe that if a female suspect is willing to physically challenge the officers, then there is no telling what type of behavior they will resort to overcome the wishes of the officer. On the other hand, it may be that this effect is a product of the factorial design in that by imposing characteristics or traits of female suspects usually reserved only for male suspects, the uncertainty of how to deal with the situations may be artificially inflating the coefficients presented.

**Summary and Lessons Learned**

In this chapter we have presented these data three ways to explain and demonstrate that it is possible to develop an occupational standard by which officers, police administrators and the courts can assess the efficacy of police force. We have found that even when controlling for the suspect level of resistance and the potential threat imposed by the immediacy for action, officers on the average are less sure with regard to how they should apply force when the suspect is a female. Based on the
analyses presented in this and the previous two chapters, there are three principal factors that one must consider before assessing the actual behavior of officers against that which may be considered excessive. These factors include the gender of the suspect, the level of resistance offered once the subject is told they are under custody and a predictive element that posits the level of threat that the situation represents to the officer or those in the immediate surrounding area. Having knowledge of these three variables allow researchers to explain anywhere from 35 to 49 percent of the variation in officers responses to the level of force they would consider most appropriate.

While the model itself is quite compelling one must remember that any model is only as good as the evidence that supports it. In this case, we are quite sure that these three elements of situations can be replicated by a quick pass through any police report where force was used. The gender of the suspect can be taken off the top of any police incident form across the country. However, the latter two must be scanned for in the text documenting the each incident. While it is fairly common for police officials to document incidents in intricate detail where force is used, it may behoove police departments across the country to add additional fields in each report so that these two additional elements (number of warnings issued, level of suspect resistance) are easily attainable in an electronic format.

The inclusion of these data elements will not only aid police departments in looking at the force their department uses as a whole, but may also help identify officers who on the average appear to be consistently using more force in their interaction with citizens than the occupation has defined. Thus in the these days, if power is information, then information that can be interactively analyzed may not only help prevent some of the
major social disturbances in years past, but may also save the job of an individual officer, his/supervisor and the chief law enforcement officer of the jurisdiction in question.
Chapter 7  
Findings, Discussion and Suggestions for Future Research  

Introduction  

The genesis for this dissertation topic stemmed from the need of officers, police administrators, court actors, and citizens to better understand what the Supreme Court meant when it defined excessive force using the “objective reasonableness” standard. All too often, police officers across the country are called to situations where a suspect refuses to comply with an officer’s demands. Whether an event occurs in Los Angeles, St. Petersburg or Sioux Falls, South Dakota, the potential criminal and civil liability associated with officers using even low levels of force is a pressing concern for the law enforcement profession.  

The risk of possible litigation is increasing putting more strain on the law enforcement profession. Denoting the prevalence of this problem, when the group Americans for Effective Law Enforcement surveyed police departments between 1967 and 1976, they found the number of civil suits filed against police departments increased by 500 percent (AELE, 1982). This finding is further supported by a study completed by IACP (1976) which found that 1 of every 34 police officers across the country had at one point been named in a civil suit. Kappeler (1997) claims that the rate in which individual police officers and department’s are sued civilly is likely to continue to escalate well into the twenty-first century.  

While this problem is apparent to line officers, a study conducted by the Police Foundation found that police administrators did not see lawsuits as one of the pressing issues for law enforcement (McCoy, 1987). In fact, Carter (1994) found that police civil
liability ranked 20\textsuperscript{th} on police administrators’ list of concerns for their agency. Police administrator’s may not rank law suits as a primary concern since in the few cases where the police are named as plaintiffs, are judgements actually sustained. Currently our best estimate for the rate in which these complaints hold up in court is 8 percent (Kappeler, Kappeler and Del Carmen, 1993).

Regarding this drain on the human side of police liability, Scogin and Brogski (1991) found when interviewing 101 police cadets, that 9 percent believed their fear of being named in a civil suit had reached a point of being “irrational and excessive.” Replicating Skogin and Brogski’s study, Kappeler (1996) found that this percentage of officers may represent at best a conservative estimate of the problem. Kapperler’s study of 220 police cadets found that 50 percent worried about being sued civilly and 31 percent worried to the point of it being labeled excessive. Thus, it appears the issue of either criminal or civil liability is a serious and pressing concern for individuals officers and indirectly for police organizations.

One of the primary contributing factors to the stress felt by officers concerning the threat of a civil suit against officers for using excessive force has been the Supreme Court’s inability to precisely define what the requirements are necessary for officers to meet the “objective reasonableness” standard. In the \textit{Graham v. Conner} (1989) decision, the Court, defined the reasonableness of an officers’ conduct by the application of two tests. First, the Court said that in situations where officers are accused of using excessive force, the case must be analyzed in terms of the reasonableness of the officer’s intervention or seizure. That is, did the officers’ initial contact with the suspect involve a stop where the officer was justified in intervening. If this intervention does not meet
grounds for cause, typically the force used would be summarily judged as unnecessary and thus excessive.

Second, the *Graham v. Conner* decision noted that the Court must decide whether other officers responding to the same situation would have responded in a similar fashion. This determination, the Court said should be made with respect to all of the circumstances both known and unknown to the officer at the time of the encounter, without any subjective interpretation. Simply put, the Court stated that decisions regarding the efficacy of police force must be judged from the perspective of a reasonable officer on the scene, without the benefit of hindsight.

In order to apply this test, Kappeler (1997) claims questions involving the efficacy of an officer’s forceful behavior involves at least a three step process. First, the judge or other presiding official must decide if the suspect posed an immediate threat to the officer or others nearby. Second, a court or some other decision maker must decide if the severity of the actions or act on the part of the suspect was sufficient cause for governmental intrusion. And finally, if the above conditions are met in the affirmative, then it must be determined if the suspect actively resisted or attempted to escape from the custody of the responding officer(s).

**Summary of Findings**

The focus of this research effort was a first attempt to both empirically and practically duplicate this fact finding process. It began with the contention that not only is police force severely understudied but also misunderstood. Chapter 1, introduced the inherent problems associated with how research on such a rare occurrence as police force has been collected to date. It showed how these efforts are of limited utility to law
enforcement officers across the country wishing to understand the level of force defined as appropriate in a specific type of police-citizen encounter. This literature review also stressed the need for some type of practical tool that officers could use as a guide to provide some semblance of order to the current standard where coercive behavior is judged as both reasonable and appropriate.

Chapter 2, examined the major research efforts to date in order to provide some clarity as to the manner in which our current state of knowledge concerning police force has been assembled. Chapter 3, described the sample of respondents and the vehicle and means which this effort used in order to develop this standard. And Chapters 4 and 5, introduced the individual and situational level correlates the extant literature has found to correlated with forceful resolutions, then tested these variables to see if these same factors influence officers decisions to use one level of force above another. These chapters split the findings into three levels of association.

The conservatives estimates in Chapters 4 and 5 noted that three factors that influence officers perceptions of the amount of force that they would consider using in a given situation. These three factors suggest that officers are more likely to rank higher levels of force as more appropriate when the suspect is male, who they have issued fewer warnings to and are actively resisting. Regarding the liberal interpretation, the analyses in these chapters suggest showed that as the number of citizens at a scene increased, officers generally felt that they were more inclined to issue more warnings and rated the amount of force considered appropriate lower than in situations with fewer witnesses. Similarly, it was found that suspects whose appearance was classified as clean and neat, were apparently deserving of fewer warnings before the officers would consider using physical
force. However, these analysis also show that suspects who the officers’ rate as being clean and neat, are in the eyes of the profession, deserving of lower levels of force both at the appropriate and highest level.38 The final finding under the liberal criteria suggests that black officers on the average are willing to issue more warning prior to using force and rate the highest level of force they would consider using less than white officers.

Regarding the loosely coupled suggestions, these analyses imply that calls in the later hours of the evening, and the number of hours of training an officer has received in defensive tactics training are likely to increase the officers belief that more warnings should be issued prior to using physical force. Whereas, training in verbalization techniques, and the suspect is considered large or hispanic is likely to decrease the number of warnings that officers feels should be issued.

Somewhat surprising, officers’ generally rated suspects within affluent communities as being deserving of more force at the appropriate level, than within either middle or lower class communities. And at the highest level, older, and hispanic officers rated the highest level of force they would use lower than younger and white or black officers. And the seriousness of the offense and demeanor of the suspect increased the officers’ determination of the highest level of force they would consider suing.

Chapter 7 examined the inter-category variation amongst the principal estimators to assess the amount of internal consistency across respondents and categories of the independent predictors. This analysis, found much more consistency amongst the responses when officers were asked to evaluate situations where males were the suspects as opposed to females.

38 While the pattern is the same for the dress or appearance of the suspect at both the appropriate and highest level, the
One of the most important contributions of this study is that it has allowed researchers to get beyond the impasse associated with studying a rare event like police force. To that extent, it provides insight into those 2-3 percent of cases when force is used, to determine the predictors and level of force that officers believe to be appropriate in a given police-citizen encounter. And from all indications, it is this small percentage of cases that may be causing not only the flood of litigation but the public opinion of the police and city government to diminish.

Thus far, this study is the first of its kind to look at situations where force may be used, that has the predictive power to enable researchers to better understand what factors precipitate the use of one level of force compared to another. Similarly, by using a factorial survey, focusing specifically on situations where the suspects are actively resisting, this study’s findings allow researchers to have a first glimpse of what the profession claims to be both the appropriate and highest level of force officers would consider reasonable while controlling for the effect of a variety of individual, situational and community level variables.

While the findings of this study are drawn from a relatively small sample of predominately white officers (N=784), from small to medium sized departments in Ohio, they do shed light on the rather incomplete picture of force that researchers, academics, court actors, police officers and administrators have held for some time. Thus, the models presented in this paper are important for the relationships they confirmed, and the relationships that were dismissed. The suggestion that such individual traits of officers such as gender, height, weight, years of service, educational level, number of physical relationship only met the tolerance level to be noted as significant at the highest level of force considered.
confrontations and injuries resulting from these experiences did not withstand our most stringent empirical testing, questions our current state of knowledge concerning what officers are more likely to use force and by default, the levels of force they deem appropriate. Other individual factors of suspects such as race, demeanor, age, and size that failed to load on at least two of the three dependent variables call us to question contemporary notions regarding how officers react and relate to citizens in the course of their occupational mandate. Thus, if this study’s findings can be replicated with actual field observations, it may be possible to remove some of the individual based, extra-legal factors from consideration when determining if the amount of force used by an officer in a given situation was indeed excessive.

Similarly, the situational variables that the extant literature clings to regarding when and how much force officers deem appropriate is also called into question. The notion that such variables as suspicion of alcohol or drug use by an opponent and the lack of data to support claims that the seriousness of the offense, and number of officers or citizens present upon entry, fail to reach the required level of significance to reject previous findings suggests that too much credence may have been given to environmental cues that either observers or officers recalled in retrospective report writing. Thus, it may be that instead of using observational studies and archival data sources, it may be that future research on police force would be better served to follow the lead of this study and ask officers themselves what situations and factors they believe effect not only the efficacy of police force, but the level of force they chose.

The major conclusion that may be gleamed from these data is that decisions to use force and the level of force applied is a product of the interplay between a limited number
of the personality attributes and actions of both officers and citizens, rather than a set of preconceived notions about a potential suspect, officer, place or type of call. The finding that only the gender of the suspect, level of resistance and overall threat that the officers perceive by the totality of the circumstances, significantly effects the levels of force consider appropriate and the highest level of force officers consider reasonable supports the notion that police action (or force) is not and should not be conceived or judged by anyone other than an officers’ peers who have unique knowledge of the citizenry and the type of incidents that may evolve. For this reason, it makes little sense for either side in an adversarial proceedings to use expert witnesses whom have never seen or been involved in a heated police-citizen encounter. While this study did not look at the variation amongst respondents between departments, we would expect such an effort to be a rich source for future explanations of the varieties of opinion regarding police force and behavior.

**Suggestions for Future Research**

Based on the findings of this first look at these data, it is suggested that future research in this area should concentrate in four principal areas. These areas include: a search for interaction effects, the role and influence of police organizational culture on attitudes and perceptions pertaining to police force, an examination of the factors that lead up to the implementation of force, and the role that specific and targeted training modules may play in changing attitudes and perceptions concerning the amount of force that should be reasonably applied.
**Search of Interaction Effects**

The first of these areas should inevitably include research that searches for interaction effects among the principle estimators and those factors that the extant literature has stated are correlates of situations where the police use force. It may be that officer suspicion of drug or alcohol use does not produce an additive effect on all situations, but may introduce its explanatory power only when the suspect is either large or in situations where a victim has been assaulted. Similarly, while the race of the suspect did not directly effect the levels of force considered reasonable, it is plausible that this effect is not true for officers who either young, have less experience or are less educated.

**The Role of an Organization’s Police Culture**

A second area of research that is need of further examination is the role of that the culture of a community or policing organization plays in the shaping of the normative boundaries of officers’ regarding the level and types of coercive interventions accepted. While these analyses were not completed in this work, the survey data collected from the respondents in this sample are assembled for such an examination. At this point, we can only explain the officers’ in this samples’ aggregate perceptions concerning the levels of force that they would consider appropriate. However, through the use of hierarchical linear models (HLM), further explorations into the variation within and across organizations can be made. By using HLM procedures, we may be able to tell how much of the variation in officers responses in this sample were the result of the culture of the

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39 Most importantly, this work should look at the unique and combined effects of the predictive elements whose direct effects where found to be unrelated to the included dependent variables.
community or organization, and how much of the variance in officers’ perceptions can be explained across respondents.

**Look Below Level of Physical Force Used**

A third area that deserves further investigation that was not looked at in this analysis concerns the dynamics of the interaction between the time officers issue their first verbal command and the final resolution of the encounter. Rubenstein (1973) describes this initial sequence of actions, as the process by which officers assert their authority and control over situations. Similarly, Sykes and Brent (1980) found that in the initial sequence of police-citizen encounters, officers assert their control in situation rather subtly by asking questions. For these authors, the context in which officers either ask questions and/or respond to citizen actions often determines how the encounter will be resolved and by default, if force will be used.

Because in this study, we were only interested in only encounters where force is used, the present study did not examine the interactional dynamics of the behavior of the citizens both between the issuance of the first utterance of officers and either the final resolution or the escalation to physical force. By focusing on this limited portion of a fictional police-citizen encounter, we have no means to assess what actions or behavior on the part of the suspect would contribute to the utterance of another warning or the implementation of force. Further research should look at the front end of police-citizen encounters to fill this void. While Sykes and Brent (1980) found that officers’ responses were primarily dictated by this interaction phase, it would behoove future research efforts to focus on this area in order to determine how a citizen’s demeanor, body language or the context of a situation effects the officers perceptions of the threat that they represent
to the officer’s authority and how they feel that these situations should resolved. If

enough encounters could be systematically analyzed and recorded, then it would follow

that future research could be established to provide officers with a rough guide in how

best to diffuse situations where force may have previously been the preferred tactic.

**The Role of Training**

The final area that need further investigation is the effect of specific and

specialized training modules for police officers that concentrates not only force

avoidance but further advances how officers deal with citizens on a personal level. Fyfe

(1995) claims that training modules are important because they serve as important

socialization tools that teach officers in explicit terms, their employers philosophies,

values and expectations.

These departmental values must be reflected in the formal policies both written

(and not) and shared to officers in the form of a continual process of in-service training.
The findings presented thus far present a compelling argument that further training is

need in the areas of defensive tactics, verbalization techniques or other areas designed to
curb potentially volatile situations before they spiral out of control. While it is important
to share the expectations of the department regarding how these situations should be
handled, it also necessary that these session simulate as close as possible the real world
conditions that officers face when decisions must be made quickly in crisis situations.

However, training does not only have to happen in the classroom. Fyfe (1995)
claims that training out of the classroom may be just as if not more important as that
within. Given Uelman’s (1973) finding that the major determinants of the rate in which
police use force (in this case deadly force) are the personal philosophies, policies of the
chief, the organizational culture that permits officers to handle potentially violent situations in their own way, is important to understanding how officers’ will respond to citizens regardless of a departments formal policy. In this light, the action (or inaction) on the part an officer’s first line supervisor can be considered training. If officers believe that that the formal dictates of organizational pollicies are often ignored in practice, then the effect of formal training is nullified. Thus the only way to insure that officers adhere to policies designed to limit liability of officers and departments is to force supervisors to tightly manage officers and review reported incidents where force was used. This management technique, in essence restricts the opportunities where indiscriminate force may be applied with minimal departmental oversight.

Barrineau (1987) claims that the need for police agencies to use proactive training modules and supervisory techniques to prevent the inherent liability associated with claims of excessive force is a must. These mechanisms teach officers to be able to identify crisis situations, and provide them with a guide for tactics which help officer resolve crises. Also inherent in a sound organizational risk management strategy is the need to carefully review officers’ action to determine if they responded in accordance with the formal policy of the department and the training they have received. And finally, police administrators must insure that corrective action is taken against all officers who have unreasonably deviated from these formalized guidelines. It is suggested that only by adhering to all of these suggestions, and by incorporating training modules can the police limit the actual or potential liability of officers and their own department.
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U.S. Code. Title 18, Sections 241, 242, 1341; Title 42, Section 1983.


Appendix A

Justifications for Analytic Strategy

Introduction

Social science is fraught with measurement error. Measurement error is typically caused when researchers can or do not adequately measure a social phenomenon. The problems associated with measuring police force is not an exception. One of the primary reasons why police force has typically suffered from measurement error is that it is not possible to code all potential iterations of police responses to citizens actions. Thus, researchers have been left to categorize police force into several modal types. In the past these types included such classifications as did the police use force, was their physical injury to the suspect and did the officer pull his weapon. It was not until late, did researchers begin to operationalize police force as a continuum of possible responses. These continuums are designed as latent indicators of all possible iterations of officer responses that comprise police force.

Serving only as a possible indicator of the possible police responses to suspects behavior, one could argue that the categories contained in existing police use of force continuums have more ordinal properties than interval. While this in the strictest sense is true, Jaccard and Wan, 1996:3) claim that the critical issue in determining the type of analytic strategy to use is not dependent on the actual but the “extent to which a set or a measure approximates interval level characteristics.” They claim that if the approximation is close, then the variable can often be analyzed effectively using statistical methods that assume interval level properties. Otherwise, is likely that the
coefficients derived from using OLS regression will significantly underestimate the effect of regressors on ordinal dependent variables (McKelvey and Zavoina, 1975).

At least three studies have been undertaken to determine the degree in which an categorical variable must found to approximate the intervalness of a existing unobserved variable (Anderson, 1981, 1982; Wegener, 1982). However, Jaccard and Wan (1996) found that none of these studies have achieved a level of agreement or congruence necessary to be engrained as a permanent statistical theorem. Additionally, others such as Bohrnstedt and Carter (1971) and Busemeyer and Jones (1983) have found through a series of Monte Carlo exercises that severe departures from ignoring the true properties of interval level variables as dependent predictors do not significantly affect Type I or Type II errors.

Based on these findings, it seems reasonable that the utilization of ordinary least squares (OLS) regression is a possible alternative to either collapsing the variation in the dependent variable into a dichotomy and using logistic regression, employing a multinomial logit or probit run and addressing the probability that an outcome would fall into a category higher or lower than a selected point, or using ordered probit to determine the likelihood that an outcome would occur in one category when there are similar alternatives choices. Described below is an overview of each of these techniques and reasons why these choices were not chosen.

**Dealing With Dichotomous Dependent Variables**

It is widely recognized that the types of data used, and the problems associated with data analysis are often dependent on the research task as hand. When a dependent variable is qualitative (nominal or ordinal) in nature, special estimating techniques arise.
Nominal dependent variables are often represented by a dichotomous response that often take the form of a dummy variable. Examples of this class of dependent variables in criminal justice generally include decisions of officers to arrest, use force or whether or not an officer writes a traffic ticket. If the dependent variable is set up as a dummy variable (for instance if a police officer uses force, writes a ticket, or accentuates an arrest, it is generally assigned a value of 1 and if not a value of 0 is noted) and regressed on a series of explanatory variables. If the dependent variable has a range between 0 and 1, then we would expect the predicted values of the dependent variable to fall between 0 and 1. The predicted value of the dependent variable is then interpreted as the probability of an officer taking a course of action in a given situation. In the simplest model, using OLS regression, the predicted values often fall outside of the possible range of 0 and 1. If one accepts this model and chooses to use a linear model, one could interpret those values that lie above the highest possible value of 1 as one, and those that fall below the threshold of 0 as a zero. Although these types of models are often used due to computational ease, many researchers are not comfortable with this approach because the predicted outcomes can not ever occur.

What is therefore needed is a way to squeeze the estimated probabilities of predicting an event (like the likelihood that the police will use force) between 0 and 1, without actually predicting that an event either will or will not occur. In order to get beyond this analytical impasse, Kennedy (1992) found the two most commonly used approaches include the cumulative normal and the logistic functions. He claims that the use of a cumulative normal or the logistic function creates logit or probit coefficients that standardize the predictive probabilities that an event could occur in such a way that
the predicted values of the dependent variable fall within an acceptable and plausible range. The use either the cumulative normal and logistic function varies depending upon the data and research question at hand. Although, in practice, the logistic function is most often used since it entails fewer computational steps and is easier to interpret.

The estimation of models with categorical dependent variables generally fall into two basic categories. In simple models where there is only one or two independent variables, this may be accomplished by grouping the aggregate data into say a 2 X 2 matrix and comparing the marginal percentiles of those officers who either did or did not say use force by the possible gender of the suspect. Further, using OLS regression, this may be accomplished by using the group estimated probabilities as a dependent variable and regressing the independent variables group means. In this case the error terms will be heteroskedastic (because the dependent variables observations are estimated), and this process would not avoid the problems associated with a probability estimates of less outside or equal to either cases where force is either used or not.

However if one choose to use the logistic function, the probability of an officer using force can be shown to be equal to the logarithm of the ratio of the probability of officers using force and not using force. This logarithm may be calculated for each group from the group estimated probabilities, regressing this new dependent variable on the explanatory groups’ means. The probabilities produced by these estimates will lie between 0 and 1 but like the previous group, will suffer from heteroskedasticity.

In cases where there are either a large number of explanatory variables or a small number of respondents, that cannot be grouped, researchers are left to decide to decide if they want to use the OLS regression and take into account the heteroskedasticity created
by the error term to make the predicted values between 0 and 1. Or if they want to use a logit or probit model estimated via a maximum likelihood solution.

**Polychotomous Dependent Variables**

It is often the case that the data or research question which we are looking at is either not dichotomous or ratio in nature. In cases where the dependent variable can assume three or more categories, the assumptions of OLS regression often prohibit the use of this method because the results are often biased because there is no true cut-points in the scale represented by the dependent variable. In this case, the use of the logit distribution often proves to be a more efficient estimator. Knoke and Burke (1980) claim that when the dependent variable is qualitative and has three or more categories, logits can be formed from contrasts on non-redundant category pairs. Each logit is then modeled in a separate equation. This technique is referred to as polytomous or multinomial logistic regression. While traditionally, polytomous dependent variables have been handled with discriminant analysis, polytomous logistic regression may be preferable since it is a natural extension of logistic regression and may thus be more interpretable since there is no requirement that the predictor set have the multivariate normal distribution (Press and Wilson, 1978).

Estimation of the probabilities of these coefficients in this context is undertaken by means of a generalization of the logistic model called multinomial logit or multinomial probit. These methods were originally designed by econometricians using models based on the “theory of random utility.” This theory is based on the assumption that given a choice, respondents in a specific context will overwhelmingly choose one alternative because its utility will be of greater benefit than all the other choices below it.
In marketing and economics, this approach makes good sense since often the choices that one makes are for products that fulfill a specific need. The multinomial logit and probit models follow from assumptions made concerning the nature of the effort in this random utility model.

However, when applied to the social sciences, there is often not much difference between agreeing, somewhat agreeing and strongly agreeing with an attitudinal statement. Thus assuming a linear distribution, we would expect the probability of choosing one selection to decrease the probability of the categories immediately surrounding it by half. However, the algorithm designed for ordered probit does not allow for the probability of these two competing alternatives to split the probability equally between the two competing categories. Instead the probability of the first choice (or second) is normalized and computed in with all those choices either above or below that selected response category.

There is however a fix to addressing the problems associated with the random utility theorem. If a model is computed assuming that the error terms are distributed multivariate normally, then what is produced is the a multivariate probit model. These models allow the error terms to be distributed and correlated across alternatives, thereby permitting them to circumvent the independence of irrelevant error terms dilemma. However, these coefficients for multinomial probit models are often cost prohibitive and provide little more information than the likelihood of a case falling into one category of a dependent variable compared to all others regardless of their order.

There is an alternative to using multinomial logits or probits and the problems inherent with using and interpreting multi-nominal probits. This alternative is commonly
labeled “ordered probit.” Ordered probit has proven to be an efficient analytic strategy when variable under question appears to be naturally ordered resulting from a continuous, unobserved latent variable expressed in terms of categories (Liao, 1994). Examples of the types of data that are appropriate with ordered probit include such things as movie ratings, the creditworthiness of a potential customer or the classification of an officer who in the past has used more or less force than other officers. Kennedy (1992) claims that the use of multi-nominal logits or probits would not provide researchers with an efficient estimate of the effect of the independent variable(s) because it does not take into account the true ordering of the dependent variable.

Consider for example the fictitious rating of officers who were more, average, or least likely to use force. If we were to compose an index on such variables as the number of forceful encounters in the past year, years of service and highest level of formal education, we could conceivably rank officers into three categories (high, average, and low force). Thus we would assume that officers who have used force less often in the past year, have more experience and have obtained higher degrees would be expected to fall within the thresholds of low force officers. This is exactly what these coefficients would yield, at least in a model with only three categories. In this model, if these three conditions are met, the likelihood that the officer would be classified as a “low force officer” would increase. Using these same conditions, the likelihood of the outcome falling within the second category (average force officers) would decrease. And Kennedy (1992:245) claims that the odds for the third category may be uninterpretable since the odds (high-force officers) could go either way.
While an ordered probit model appears to be a viable solution, it is not without problems. Aldrich and Nelson (1985) and Menard (1995) claim that ordered probit estimates often produce predicted values of the dependent variable that lie out of the range of the dependent variable. This happens for three reasons. First, the formula under the proportional odds assumption assumes that changes in the dependent variable will be stochastic across all cross-category comparisons within the dependent variable. That is, the effect coefficient (and thus error terms) produced and simultaneously estimated during the program’s maximum likelihood iterations must be invariant across categories both higher and lower to the predicted value. If heteroskedasticity is apparent within an estimated model, errant values are likely. The second cause of problems using models with a limited range dependent variable model, is that a series of extremely large or small values in one of the explanatory variables may distort the distribution and variability of the residuals which in turn will influence the model’s predictive power (Aldrich and Nelson 1984; Schroeder, Sjoquist and Stephan, 1986). Third, Greene (1992:538) states that since the both the ordered probit and logit models depend heavily on the cross-classification algorithm, the presence of non-empty cells may cause the estimation process to either breakdown or produce faulty estimates. This may be especially problematic if we consider the number of independent variables and the belief that officers would be hard pressed to evaluate the level of appropriate force the same for criminal suspects who passively resist an officers’ directives compared to those whose physically threaten the life of the responding state agent.

Thus ordered probit does not allow of stable and easy interpretation of the effect of explanatory variables on a limited range dependent variable even if it does represent an
underlying latent scale. This problem is further exacerbated when the number of categories of the dependent variable exceeds three and the number of independent or covariates exceed one. In these cases, it may be better to use multiple regression, noting that the effect estimate of the independent variable is a conservative estimate, although significant in the appropriate direction (Kennedy, 1992:231; Menard, 1992:71).

Further, DeMaris (1992:77) claims that if the researcher is in doubt, “he or she should use both techniques. If no substantive differences emerge, then OLS, would be an acceptable approach. If differences emerge, then the ordered logit approach should probably be followed.” Thus to address concerns regarding the problems associated with the proportional odds assumption and the possibility of a number of empty cells, I ran one model two ways. The first model was estimated using a maximum likelihood ordered probit solution. The second uses OLS regression. These two models are useful for comparing and checking the contention raised by Bohnstedt and Carter (1971) and Busemeyer and Jones (1983) that ignoring the true properties of ordinal level data and treating them an interval using some inferential methods rarely effect the making of a Type I or Type II error.

Detailed below is a series of simulated runs comparing an ordered probit model to an OLS regression run predicting the highest level of force an officer would use, based on their knowledge of the gender and level of resistance of the suspect, and the overall threat imposed by the totality of circumstances. Looking specifically at the coefficients produced by both models, it is fairly obvious that using either research strategy produces statistically significant results in the appropriate direction. While it is not possible to compare the coefficients of the two equations, Hedeker (1996) notes that it is possible to
assess the potential strength of the relationship in the ordered probit run by noting that higher $z$-values and lower standard errors for the coefficients are generally indicative of stronger relationships. This relationship is also noted in the OLS regression run by the size and magnitude of the standardized regression coefficients compared to the other explanatory variables.

The F-statistics for the OLS models and the $\chi^2$ statistic for the probit model confirm that both equations are statistically significant, thus the independent variables have a jointly significant effect on the highest level of force that police officers view as appropriate. The significance levels suggest that in repeated sampling, we would expect to find statistics this high by chance in less than ten thousand times.

The displayed models below confirm the assertion by DeMaris (1992) that at least in this situation, where the number of ordered categories of the dependent variables is increased to 8 levels, it is safe to use OLS regression in place of other analytic strategies such as multinomial logit or ordered probit. That is, OLS regression may be used as long as care is used when interpreting the models coefficients to be only conservative estimates of the true effect.

---

Output for Ordered Probit Model of Suspect Gender, Level of Resistance and Highest Level of Force Deemed Reasonable
*Results Produced by Mixor*

* Final Results - Maximum Marginal Likelihood Estimates *
---------------------------------------------------------------------
Total Iterations = 18
Quad Pts per Dim = 10
Log Likelihood = -2418.868
Ridge = 0.000
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<th>Stand. Error</th>
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<th>p-value</th>
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</table>

Output for Multiple Regression of Suspect Gender, level of Resistance and Highest Level of Force Deemed Reasonable

*Results Produced by Spss*

Model Summary
R = .637
R Square = .406
Adjusted R Square = .403
Std. Error of the Estimate = 1.4823

ANOVA (b)

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Coefficients (a)

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<td>16.260</td>
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