

International Journal of Criminology and Sociological Theory, Vol. 4, No. 2, December 2011, 657-673

Tasers, Accountability, and Less Lethal Force: Keying in on the Contentious Construction of Police Electroshock Weapons

Brian Wolf^a
Joseph De Angelis^b

Abstract

Over the last decade, Tasers and other electroshock devices have become a nearly standard, though highly controversial, piece of police equipment for law enforcement. While a great deal of research focuses on the technical merits and health effects of this type of device, we adopt a constructionist framework and explore the manner in which different sets of actors compete to construct the "reality" of this type of technology within public media. By focusing on this issue, we seek to use the debate over Tasers to explore an underdeveloped area of social problems theory, i.e., how public problems are constructed publicly through the dynamic interaction of different sets of contentious claims-making actors. More specifically, we adopt Goffman's concept of "keying" to examine how the opponents of the technology sought to appropriate and then re-deploy the claims made by proponents of the technology. By exploring the "keying" process, this paper will allow us to better understand the dynamic and iterative way in which the public claims offered by dominant and powerful groups are contested, appropriated and sometimes subverted, by less powerful groups.

Introduction

Tasers, stun guns, and other law enforcement electroshock devices have recently gone from a relatively obscure novelty to a widely adopted police restraint technology. Indeed, the Government Accounting Office (GAO) estimates almost half of law enforcement agencies in the U.S. have adopted some form of electroshock device (GAO, 2005). Though a commonly utilized tool, these types of police technology have remained highly controversial. Manufacturers of the devices, along with law enforcement actors and some police policy scholars have promoted Tasers as safe and effective form of police restraint technology. Others, including national human rights organizations, police watchdog groups, and local social movement actors have aggressively entered the public realm to problematize and oppose the adoption and deployment of electroshock weapons by U.S. law enforcement. Yet, criticism and questions concerning the dangers of such devices have largely been dismissed by manufactures and law enforcement agencies. Still, this controversy has remained highly visible in the popular and alternative medias, in part because of critical accounts of the use of electroshock weapons on vulnerable

a Department of Sociology & Anthropology, University of Idaho, <u>bwolf@uidaho.edu</u>

b Senior Research Analyst, Office of the Independent Monitor in Denver, Colorado, <u>itdeangelis@gmail.com</u>

populations, such the elderly, college students, individuals with mental illness, children, non-resisting political protestors, and restrained prisoners. Indeed, the evolving debate and controversy surrounding the incorporation of Tasers into routine police work raises important issues that are of concern to citizens, activists and academics alike. The debate around the Taser elicits broader concerns of power, authority and the delivery of justice in democratic societies.

This article explores how Tasers and other forms of electroshock technology have been caught up in a larger struggle over the construction of police use of force. In other words, instead of focusing on the technical merits of the device, this paper explores the manner in which different sets of actors compete to construct the "reality" of this type of technology. By focusing on this issue, this paper seeks to use the debate over Tasers to explore an underdeveloped area of social problems theory—that is, how public problems are constructed publicly through the dynamic interaction of different sets of contentious claims-making actors (Benford and Hunt, 2003). To this end, this paper adopts Goffman's concept of "keying" and seeks to explore how the opponents of the technology seek to appropriate and then re-deploy the claims made by proponents of the technology. By exploring keying processes, we hope to better understand the dynamic and iterative way in which the public claims offered by dominant and powerful groups are contested, and sometimes subverted, by less powerful groups.

Police Use of Force and Electroshock Weapons

The question of state-sanctioned violence is of considerable importance to sociologists and researchers in sociology and criminology. For example, the classical sociologist Max Weber (1964) defined a state "as any entity that has a monopoly on the legitimate use of violence within a given territory" (p. 154). Egon Bittner defined the core role of the police as the ability to use force to solve situational problems (Bittner, 1990), an ability that is largely denied to other occupations. Thus, as Jean-Paul Brodeur (2005) observes, "...far from being inherently problematic, the relationship between violence and policing is viewed as unquestionable" (p. 207).

Even though force is central to policing, it has long been a source publicly controversy for police departments. Indeed, from the 1960s to 1990s, it has been common for major urban riots in the United States to be catalyzed by a police department's use of force (Walker, 2005) and stories of the police using excessive force have been a staple of the popular media for decades (Lawrence, 2000). Partly as a result of the controversy surrounding police use of force, there has been considerable recent interest in the development of "less lethal" force technologies that can be used by police officers to restrain uncooperative subjects (Adams and Jennison, 2007). From early 1920s experimentation with chemical munitions (White and Ready, 2007), to more recent developments in pepper sprays, blinding lasers, and energy beam weapons, police departments have routinely sought to develop ways of controlling dangerous or uncooperative subjects without using the type of highly visible force that can trigger institutional or organizational legitimacy crises (Rappert, 2003). Not surprisingly, the link between police use of less lethal force and its connection to the perceived legitimacy of police and government has been a growing concern of among academics (Koplow, 2006; Rappert, 2003).

This article explores the controversy surrounding one particular area of less lethal technology for law enforcement— Electro-muscular disruptors (EMDs). Colloquially referred to as TasersTM, this type of less lethal technology has been widely adopted by U.S. law enforcement. One of the most common EMDs, the X26

TASERTM stands for Thomas Swift Electric Rifle and is drawn from Victor Appleton's early 20th Century children's novel. Even though the term "Taser" is the registered trademark of Taser international, it is a term that has become synonymous with electro-muscular disruptors, largely as a result of Taser International's almost complete domination of the Western law enforcement market in these types of devices. As a result, we will refer to electro-muscular disruptors as Tasers.

produced by Taser International, is a hand-held weapon that delivers a high voltage, low amperage electrical charge via two delivery mechanisms. Like a stun gun or cattle prod, it can be used as a pain compliance tool and deliver a high voltage shock by pressing two probes against a person's body (called "drive stun" mode). Tasers can also be used in "probe mode," where two modified fishhook-style barbs connected to insulated wires can be fired up to a distance of several dozen feet. When the two probes successfully attach to a person's skin or clothing, a circuit is created and a rapidly pulsed electrical charge is delivered that interferes with the peripheral nervous system, causing them to suffer from severe pain, intense muscle contractions, and lose control over their voluntary muscles (Vilke and Chan, 2007). In short, Tasers deliver an excruciatingly painful electrical shock and induce almost instant paralysis, leading the targeted person to fall almost immediately to the ground.

The Taser was initially developed in the mid-1970s by a former NASA physicist in an attempt to create a non-lethal replacement for the firearm (Nadel, 1977). More specifically, early versions of the Taser emerged as part of a larger national movement to develop and field "non-lethal' technologies, including chemical sprays, lasers, grappling devices, and deployable netsthat could reduce the use of firearms (see Koplow, 2006; Vilke and Chan, 2007; Gau, Mosher, and Pratt, 2010). Within this movement, Tasers, stun guns, and other types of electroshock technology were routinely framed in the 1980s as a being a way to "humanely" control individuals who were in altered psychological states. And pressure to adopt less lethal weapons was often driven by local crises resulting from officer-involved shootings of the mentally ill and individuals under the influence of drugs. While the Taser has existed since the 1970s, it was not until the early 21st century that the Taser began to be widely adopted by police departments. According to the National Institute of Justice (2008) more than 11,500 law enforcement agencies have acquired 280,000 EMDs. Given the number of agencies that have adopted these devices, Tasers now represent an important and lucrative part of the market in police force technology. For example, Taser International, Inc., the largest manufacturer of Taser devices, became a publicly traded corporation in 2001, and by 2007, reported \$15 million in profits on more than \$100 million dollars of revenue.²

Despite the popularity and widespread use of Tasers, they remain highly controversial and widely reported on in the popular media. Some of the controversy has seemingly resulted from instances where individuals have died after being subjected to aTaser, such as the recent case of a New York City man who fell to his death from a ledge after being shot with a Taser for threatening NYPD officers with a fluorescent light tube (Fahim and Hauser, 2008). Yet, one of the most important features of the controversy over Tasers is that an important part of the public debate has been driven by incidents where the police used these devices on individuals who were not seriously injured and seemingly suffered no lasting physical effects. The fact that these types of incidents have generated such tremendous publicity raises a number of important questions about the nature of the controversy over Tasers. What is it about this technology that lends itself to coverage in the both the mainstream and alternative medias? Why are Tasers, which were framed early on as more humane alternatives to other forms of force, the subject of such intense public conflict?

Overall, very little research addresses these types of questions (see Adams and Jennison 2007; Kamiski 2009). A large proportion of the scholarship on Tasers has focused largely on either its effectiveness at incapacitating aggressive subjects (GAO, 2005; White and Ready, 2007; Meyer and Greg, 1992) or their short-term health effects, especially cardiac disrythmia, miscarriage, and the secondary physical injuries subjects resulting from a sudden loss in motor function (Vilke and Chan 2007; White and Ready, 2009; Kaminski, 2009; Council on Science and Public Health, 2009). More recently, some social scientists have begun to examine how the Taser is being integrated into police use of force policies and training (GAO 2005; Smith et al 2009; Chermak 2009). Others have begun to examine how officers are using Tasers in the field (Munetz, Fitzgerald and Woody 2006; Smith et al 2009). Unfortunately, while the deployment patterns and health consequences of Tasers are increasingly understood, we know far less about the social effects that the spread of this technology

659

_

Taser International, Inc. (2009) reports in their 2007-2009 Securities and Exchange Commission 10-k Filings, 2007-2009that roughly half of half of their revenue is from the sales of the X26 Taser and another quarter of their revenue is on sales of the cartridges for the device.

has had on perceptions of police legitimacy or on how police use of force is represented in the public sphere. By examining the public controversy over the use of Tasers by law enforcement, this paper is a response to the relatively recent call by Benford and Snow (2003) for more work examining the interactive basis of public problems construction, with our particular focus being on how rights activists discursively resist the claims of the powerful.

Social Constructionism and the Keying Process

Like all social problems, controversies around police use of force are social constructions that emerge through the agitation of individuals and groups (Lowney and Best, 1995: 33). By looking at the competing constructions of Tasers, we are attempting to avoid questions about the "objective" merits of such devices and instead focus on the subjective or definitional qualities of the technology. The basic insight of social constructionists is that our understandings of social problems and meanings associated with them are cultural products that are produced through social activity (Gusfield, 1981). Thus, from the constructionist perspective, social problems are seen as historically contingent and culturally variable (Pfohl, 1977). It is not necessary for "objective" or painful conditions to exist for something to be constructed as a social problem. Nor is there a necessary relationship between objective conditions and public concern (Spector and Kitsuse, 1977; Gusfield, 1981). Indeed, social problems can fade in and out of the public sphere without any clear change in the underlying "objective" conditions. (Gusfield, 1996).

From Spector and Kitsuse (1977), social problems are types of social activity by which individuals or groups offer claims in relation to "putative conditions" (1977: 75). By this, Spector and Kitsuse wanted to emphasize the definitional qualities of social problems and to argue that the role of those working for the constructionist perspective is to examine how sets of meaning are constructed in relation to social problems. In order to study how issues come to be defined as social problems, social constructionists tend to focus on the social and political activities of individuals and groups, termed "claimsmakers," who compete within a "social problems marketplace" (Best, 1995) to identify certain conditions as harmful and in need of correction (Spector and Kitsuse, 1977; Sasson, 1995; Lowney and Best, 1995). From this standpoint, social constructionists examine how groups struggle to convince an audience that some condition is troublesome and in need of amelioration (Loseke, 1999). So instead of focusing on the objective features of police less lethal technology, this approach allows us to examine how one group of actors (Taser supporters) seek to construct the "reality" of this technology, and how another group of actors (Taser opponents) seek to resist those claims.

While there has been a great deal of work done in the area of the social construction of social problems, it is common for social constructionists to focus on successful claims of powerful groups (Gusfield, 1981). That is to say, constructionists have historically tended to focus on the claimsmaking activity of powerful groups that are able to enter the public realm, offer a set of claims about a particular problem, and have the public accept those claims as legitimate. Moreover, very little work has focused on the dynamic, iterative process by which groups interact in the construction of public problems (Benford and Hunt 2003). As Benford and Hunt (2003) note, most constructionist have tended to focus on the processes that are internal to individual social movement organizations, agencies, media groups, or other social problems claimsmakers (p. 154). Yet even the claims of powerful actors are often contested and subject to counter claims by opposing groups (Blain, 2005; Loseke, 1999). And within the struggle to define social problems publicly, there is always a "...drama between proponents and antagonists as each seeks to establish it's definitions of situations and imputations, to rebut and discredit their opponents' claims, and to inspire individuals to either engage in collective action or stand fast and not act upon others' problem claims" (Benford and Hunt, 2003: 154). Unfortunately, very little work has been done on theinteractive features of the competitive definitional process. Thus, in this paper, we seek to explore the dramatic interplay between supporters and opponents of Tasers as they compete to construct the problem of

police use of electroshock weapons.

In order to examine the process by which claims are offered and contested, we focus on the "keying" process within claimsmaking interaction. Initially developed by Goffman (1974), keying refers to "...the set of conventions by which a given activity, one already meaningful in terms of some primary framework, is transformed into something patterned on this activity but seen by the participants to be something else" (Goffman, 1974: 43-44; Quoted in Benford and Hunt, 2003: 170). While "keying" is not an idea that has been extensively used in empirical work, it has been adopted by researchers studying framing activity in social movements. Snow et al. (1986) argues that keying is a crucial process for certain types of social movement organizations (SMOs). For example, when the values, ideas and beliefs of a particular SMO are not resonant with the conventional lifestyles or values of the larger public they are trying to target, then that SMO must attempt drastically alter the framing of the their message(s) in a way that can secure the support and approval of the larger audience (Snow et al., 1986: 473). To accomplish this, the SMO must attempt to systematically redefine certain conditions that are already known to the public in a specific context, as something that is radically different and worthy of social action. Thus, Snow et al. argues that SMOs may attempt to redefine a frame that is currently tolerated by the public as a condition that is fundamentally unjust and in need of change (1986, p. 474).

While Snow et al. provided several examples of how this keying process might work, very little empirical research has explored this strategy in struggles over the construction of social problems. One of the few exceptions to this is a chapter offered by Benford and Hunt (2003). In this work, they provide the most extended statement on how keying functions in the interactional dynamics of social problems construction. In brief, Benford and Hunt observe that successful claimsmakers do not devote all of their resources to simply constructing the realities of public problems. Instead, they also are forced to devote significant energy to responding to the claims and counterclaims of opponents (2003: 169). While they note that there are multiple ways in which this occurs, they argue that keying is crucial strategy for debunking the claims of opponents. By "keying" they described a practice whereby a claimsmaker adopts the claims made by an opponent, and then refashions them in a way that subverts the original meanings (2003: 170). For example they describe the manner in which peace activists in the 1990s had adopted ideas about "national defense" but then redefined and recast them in terms of "national security" (2003: 170).

While keying can conceivably be used by both strong and weak claimsmakers, we argue that keying is a process that is heavily influenced by power dynamics (at least in the context of struggles over social problems). That is, we believe that keying can be a tactic that relatively weak and non-conventional claimsmakers can use to oppose and subvert the claims offered by more powerful, mainstream opponents. From this perspective, oppositional groups with few claimsmaking resources can seek to undermine the claims of more powerful claimsmaking opponents by first adopting the core ideas or themes offered by the opponent, and then "keying" or transforming the those ideas so that they have a new set of meanings. Thus, one of our central concerns in this paper is on dynamic situations where one group of competitors take up the claims made by a competitor, but then restate them in such a manner that they now have a new meaning that stands in opposition to the original claim (Benford and Hunt, 2003: 170).

For the purposes of this paper, we seek to examine how both proponents and opponents of Tasers construct the social problem of police electroshock technology, with a focus on how opponents use keying to resist the claims made by the proponents of the technology. By focusing on keying processes, we should be able to better understand the dynamic nature of the interaction between competing groups, with a particular focus on how groups with relatively few organizational resources (opponents of Tasers) oppose the claims of more powerful sets of claims-makers (police departments and corporations).

Methods

Our central concern in this study is to examine how different groups of actors entered the public sphere to compete over the construction of police use of Tasers. To explore this issue, we conducted a textual analysis of primary documents electronically published by both the proponents and opponents electroshock weapons between January 1, 2001 and January 1, 2009.

By "primary documents," we mean electronic documents such as blogs, press releases, website text, and other electronic media that are not published through mainstream news organizations (such as the New York Times or USA Today). So for example, we focused on material such as internet blogs, which are similar to online diaries, where individuals write about issues that concern them. These types of documents differ from traditional news sources because the individuals who write those blogs (or produce the website text, write the news releases, etc.) are often not professional, full-time journalists. Instead, they are often rights activists or concerned local citizens who want to publish their views on a particular issue.

While researchers that study patterns of public discourse often focus on one particular social location and medium (Altheide, 2000), such as a particular print newspaper or a discrete series of television episodes, we found this type of focused research was somewhat untenable when it came to studying the discursive struggle over Tasers. As we read media accounts of incidents involving these devises, we found that the claims of local grassroots rights activists were poorly represented in media accounts, while police departments and industry perspectives were heavily represented. As a result, we chose to focus our project on primary documents, rather than news reports or traditional media accounts of Tasers as a way of avoiding the problem of the journalistic filtering of claims. We reasoned that there might be resource differential between the groups that support Tasers versus the groups that oppose them. It also appeared likely that the supporters of Tasers (e.g., Taser International, Inc and police departments) would have better access to mainstream media outlets than the opponents of Tasers. To ensure that we could explore how rights activists attempted to publicly oppose the adoption of Tasers, we examined only primary documents produced by supporters and opponents of Tasers.

The documents used in this analysis were identified through three principle methods. First, we conducted keyword searches for "Tasers" and "stun guns" in two major internet search engines, Google.com and Yahoo.com. Links for websites that appeared to be related to Tasers and police were selected, and the appropriate websites were culled of text, documents, and images relating to Tasers. Second, in order to capture material not identified through the general keyword searches, we skimmed through articles published between 2001 and 2009 for four major newspapers and wire services³ looking for references to either formal organizations or informal groups that either promoted or opposed the use of Tasers. Once these groups were identified, internet keyword searches for the agencies name were conducted and their organizational websites were located (when available). The text and claims-related documents on these websites that related to police and Tasers were then captured and saved as text or image files, depending on the format of the original document. Third, since website text can change very rapidly over time, we also reviewed the website text for key organizational players from 2001-2009 using the Internet Archive, a non-profit group that uses a web crawler to maintain an electronic database of archived web pages for academic and research purposes (www.archive.org). The Internet Archive's database can be searched using a website's URL, and we used URL searches to identify and review the archived website text and images of the main Taser-related manufacturers. Altogether, the material captured through these three strategies included website text, blog posts, technical/policy reports, press releases, position papers, pamphlets/promotional material, and financial disclosure

The New York Times, The Atlanta Journal Constitution, The Denver Post, and The Associated Press.

forms. This approach resulted in 121 discrete text documents for Taser opponents and 108 text documents for Taser proponents.⁴

In order to explore the interactive claims making process, we divided the groups into two primary competitive camps. While it might be possible to create more refined categories, we chose to collapse the different actors into two camps in order to focus the analysis on the process that claims and counterclaims are made by vying groups. We have termed the first camp the "proponents," and included Tasers manufacturers, police departments, industry promotional groups, and police use of force trainers/consultants. For the "opponents," we included international and national rights groups such as Amnesty International and the American Civil Liberties Union. We also included local police watchdog groups like Copwatch, as well as online anti-Taser activist blogs like *Excited Delirium.com*, *Truth Not Tasers*, and *Stop Taser Abuse Today*.

To analyze the textual data, we conducted a discourse analysis of Taser-related texts. The textual material for proponents and opponents were read separately and in temporal order. Our initial goal was to identify recurrent patterns in the discursive claims offered by both the proponents and opponents. In the second stage, we sought to identify the broad themes around which the different groups struggled. So following multiple re-readings of the texts, the individual themes were re-examined and collapsed into broader and more inclusive themes and subthemes. Text segments representing the major themes and subthemes were then electronically excerpted from the documents and grouped together with passages from other documents with similar themes. While there were a large number of themes and subthemes, we focus in this paper on only common themes where considerable debate takes place between Taser opponents and proponents.

As previously indicated, this research is focused on exploring how two groups of claims makers compete to construct police use of Tasers. Since we are interested in the interactive nature of the struggle, we conceptualized the competition around Tasers as involving a two-stage process. In the first stage, a proponent (i.e., a Taser supporter) offers a public claim about the technology. In the second stage, an opponent seeks to respond to that claim by adopting their opponents claim, and then redeploying it in a way that opposes the original framing of the idea. From our perspective, this two-act drama represents a process by which social problems claims are offered, expropriated, and re-crafted with new meanings. Of course, it is likely that this process includes more than two stages (i.e., we can imagine that proponents commonly respond to the countering of their claims by reshaping their discourse in strategic ways). In order to develop the simplest model possible, however, we focus on only the first two stages in this struggle.

In exploring the debate over Tasers, we identified keying processes in relation to two broad themes used by both the proponents and opponents of Tasers, which we titled *effectiveness* and *accountability*. Each of these themes were first deployed by the proponents of Tasers, but then adopted and keyed by opponents of Tasers. In the next section, we examine each of these themes, first by how the proponents of Tasers sought to construct the individual themes, and then how the opponents of Tasers sought to undermine proponent claims through keying.

Theme I: Effectiveness

One of the most common themes used by both the proponents and opponents of Tasers relates to the *effectiveness* of the device. Even though this paper is largely focused on the debate over Tasers from 2000-2009, it clear that claims regarding the effectiveness of the device date back to it its inception. In particular, Taser proponents have long sought to construct it as an effective device for incapacitating subjects. In describing the newly unveiled Taser in 1976, a New York Times reporter describes the Taser in the following way

The Taser does not depend upon physical force to achieve its effectiveness...When the Taser's electrical force is powered into the body, it generates an electrical current that dominates this existing neuromuscular

⁴ Note that each document could include multiple subparts. For example, we counted each blog thread as one document, even though multiple people posted comments to those threads.

International Journal of Criminology and Sociological Theory, Vol. 4, No. 2, December 2011, 657-673

system. When an attacker has been "Tasered," the muscles in his body involuntarily contract; he is virtually helpless and may experience pain...No matter how big or strong. Or whether he is under the influence of drugs or alcohol." (Ferritti, 1976)

Even though the device long been represented as an effective means of incapacitating individuals, the issue of effectiveness has also been a site of controversy since the Taser was first marketed to police departments. In this section, we first explore how the proponents of Tasers construct its effectiveness from 2001-2009. We then outline how Taser opponents attempt to neutralize effectiveness claims through keying.

Proponents

One of the most common themes among the claims offered by Taser proponents relates to the effectiveness of the device. As previously noted, this has historically been one of the central elements in the marketing campaign by companies selling electro-mucular disruptors, and remained a common theme from 2001-2009. For its proponents, the Taser is represented as a technological device that is overwhelmingly effective, and they commonly construct effectiveness in two related ways. The first is to claim that the device is more effective at stopping an assailant than any other form of technology. For example, one early manufacturer of the device claimed that Tasers could be *more* effective than a firearm when it came to disabling subjects

The TasertronTaserTM is a non-lethal, handheld electronic immobilization weapon specifically designed to subdue a subject within a 21-foot range...TaserTM technology is proven to be more effective at stopping and immobilizing an attacker at close range than a .38 pistol. (Tasertron.com, June 15, 2000)

In representing the Taser as superior to other control devices, they tend to highlight the technological sophistication of the device, and especially emphasize the high voltage that the device delivers. For example, an online distributor of Taser weapons claimed in 2001 that: "Air Taser Weapons will drop an assailant every time with 50,000 Volts from 15 feet away" (Taser.com, February 4, 2001). In another section of their 2001 website, they describe the M18L Taser as a

[p]owerful nonlethal weapon that drops assailants to the ground at a distance of 15 feet away. Projectiles are fired at the subject with a compressed CO2 charge that inflict 18 Watts, 133 Milliamps and 50,000 Volts of revolutionary technology referred to as Electro-Muscular Disruption (EMD). The current is more than sufficient to immediately drop 100% of all attackers to the ground, and it leaves all assailants incapacitated long afterwards. More stopping power than even a .357 Magnum and completely effective no matter where on the body the subject is hit. (Taser.com, February 4, 2001).

Central to this claim is the argument no one can resist this restraint technology, regardless of their physiology, strength, mental focus, or levels of intoxication. Taser International, the most popular manufacturer of the Tasers in the current market, describes their M26 Taser this way

Th[e] EMD effect causes an uncontrollable contraction of the muscle tissue, allowing the M-Series to physically debilitate a target regardless of pain tolerance or mental focus. The ADVANCED TASER® M-Series are EMD weapons specifically designed to stop even the most elite, aggressive, focused combatants. (Taser International, Inc., April 14, 2004).

In order to support these claim about effectiveness, manufacturers have commonly relied on what we have termed pain testimonials, where physically strong individuals are used to testify to the irresistible power of the Taser. One common way this is done is to quote police officers who have been subjected to the device. For

example, Taser.com quoted an Arizona SWAT officer as saying: "It just takes your legs out. It's like a jackhammer going Kaboom, Kaboom!" (Taser.com, January 24, 2001).

Other examples of pain testimonials have been delivered through images and video. This approach is evident in a video produced by a Taser proponent. In this video, the Taser is pitted against the "Toughest Man in the World," whom the proponents name as Gunnery Sergeant Hans Marrero (a former Marine Corps hand-to-hand combat instructor). The video opens by attempting to establish Sgt. Marrero's toughness by having a large police officer punch, choke, and grab him—all with little apparent effect. The video switches to a new scene where Sgt. Marrero is shown standing on a mat with a Taser's electrodes taped to his abdomen. He then attempts to reach a fake pistol lying on the ground while someone from outside of the camera view sets off the Taser. With the activation of the Taser, Sgt. Marrero grabs his abdomen in pain, begins grunting, and then falls to the mat while screaming "All right! All right!" The video then flashes the text "EFFECTIVE" and ends with Sgt. Marrero testifying the effectiveness of the device

I got hit with a grenade and...it knocked the wind out of me...I continued on no big deal ... I've been through a lot of pain, dislocated my knees. I was able to focus, pop it into place, and continue to fight. I've never been hit with something like that...that knocked me on my ass and I can't continue to do anything but lay there like a little baby. (Air Taser, Inc., n.d.)

Such narratives present the Taser as an effective technology that cannot be resisted by even the strongest and most motivated individuals. Yet, even though the proponents of Tasers have routinely claimed that the Taser is powerful and effective device, this particular construction of Tasers has been a site of significant resistance by anti-Taser groups and activists.

Opponents

In responding to supporters claims that Tasers are an effective restraint technology, opponents do not deny the effectiveness of device. On the contrary, opponents have been aggressive in adopting, rather than challenging, the same effectiveness claims offered by proponents for the device. Yet, rather than using these ideas to support the adoption and use of Tasers, the opponents have attempted to recast them in a way that demonstrates the inherent danger of the devices with the intent of reorienting the discourse of effectiveness. For example, opponents commonly report the technological features of Tasers, with a heavy emphasis on the 50,000 volts that Tasers deliver. Unlike the proponents, instead of using the voltage to signify the usefulness of the device, they attempt to construct what they see as the seductive and dangerous power of the device. In a 2003 report, Amnesty International claims that

Taser guns, which are marketed to police forces as a "less-lethal" alternative to firearms, shoot out two darts on the end of wires which trail back to the gun and along which a 50,000 volt shock is transmitted, causing instant incapacitation. (Amnesty International, 2003).

The importance of this is that opponents of Tasers do not necessarily directly challenge the core claim of Taser proponents—i.e., that the Taser is highly effective at incapacitating individuals. Indeed, opponents commonly use the same type of pain testimonials to highlight the overwhelming effectiveness of Tasers. For example, Portland Copwatch used a reporter's description of her experience with the Taser to highlight the power of the device

I felt, and was, totally defenceless [sic], helpless and useless. For about two or three seconds, a surge of brilliant lightening [sic] rocketed around my body and fried my guts, my blood and my bones. I lost all awareness and ability and fell to the floor... I had never felt pain like I felt when 50,000 volts hijacked my body -- and pray I never will again. (Portland Copwatch, 2003)

Within this discursive strategy, the opponents adopt the proponent's claims about effectiveness, and then recast them in an attempt to highlight the dangers inherent in this type of technology. At the core of this keying strategy is the assertion that Tasers are so powerful and so effective that they cause officers to over rely on the technology. Rather than providing a "less lethal" alternative to deadly force, Tasers are represented as increasingly displacing other better force options

Far from being used to avoid lethal force, many U.S. police agencies are deploying Tasers as a routine force option to subdue non-compliant or disturbed individuals who do not pose a serious danger to themselves or others. (Amnesty International, 2004)

Online anti-Taser groups are particularly aggressive in this area and routinely claim that the Taser is so effective that it induces police officers to take shortcuts in the performance of their duties

If that trooper didn't have the Taser, he'd have had to do real police work — just wait my client out 'til he settled down. Now the police are all in a hurry to go get that next café latte, and the Taser makes things quick...[a]nd that's when it can become a tool of torture. In my opinion it's like giving police a portable electric chair. (Gorman, 2005)

By using these types of example, the opponents attempt to recast the public construction of technological effectiveness so that it revolves around the issue of civil rights, excessive force, and political repression rather than the technical efficiency of the device.

All through history leaders have sought means to control their people...Workers need a good whippin' every now and then. It would be politically incorrect to use the old cat o' nine tails on a visible minority today. But wait. There's technology. We can set our Tasers on stun and zap 'em when they get uppity....Freedom means cowering in fear while the man in the black shirt flaunts his power. (Pittsburgh Indy Media, August 24, 2005)

Such descriptions of citizen encounters with police and Tasers have reshaped the discussion of Taser effectiveness from simply a question of utility in the field, to a broader, rekeyed discussion over the social and political consequences of a repressive social control apparatus.

Theme II: Accountability

The second central theme we explore in the paper relates to the issue of accountability. In this section, we explore first how proponents construct the technological forms of accountability built in to Tasers. Following that we examine how opponents of the devices attempted to re-key the proponent's descriptions of the Taser's technological infallibility.

Proponents

Like the issue of effectiveness, this theme has been present in discourse surrounding Tasers since the 1970s. Moreover, police officers were some of the first actors to raise concerns about the accountability of electroshock weapons. In particular, some officers and departments initially opposed the sale of Tasers and other electroshock weapons because they feared that criminals would use the device during robberies and home invasions. Indeed,

the early construction of Tasers and stun guns as tools that could be used by criminals was in part fueled by occasional news stories that featured criminals using electroshock weapons to commit particularly heinous crimes (For example, see Mitang, March 30, 1979).

In order to assuage concerns about the potential that criminals would use these devices, manufacturers began to engineer technological features into their devices that would create a record of when and how the Tasers are deployed. The most types of Tasers disperse confetti marked with a serial number when fired. Called the Anti-Felon Identification Device (AFID), this type mechanism makes it difficult for individuals (either criminals or police officers) to hide use of the device. For example, in talking about their X26 model, Taser International argues that

Whenever an Air Cartridge is fired, up to 40 small confetti-like I.D. tags called AFIDs are ejected. Each AFID is printed with the serial number of the cartridge fired, allowing departments to determine which officer fired the cartridge. (Taser International, Inc., March 12, 2004)

ore recently, technological accountability features have grown more sophisticated. Both the M26 and X26 Tasers have data ports that allow police supervisors to download deployment information. For example, the "dataport capability" for the X26 is described this way

The enhanced dataport capability records the time, date and duration of each discharge with the temperature at the time of use for the last 2,000 firings. Further, the X26 dataport connects easily through USB to any Windows® 2000, XP, or ME PC. This data has saved officer's careers from false allegations, and it helps agencies monitor for misuse. (Taser International, Inc., March 12, 2004)

Some newer versions of the Taser now also include audio and video recording capabilities, which would allow supervisors to observe the circumstances under which a Taser is deployed. Central to this argument is the claim that the technological features make police officers far more accountable for Taser use than for the use of other types of force technology. For example, in discussing their new "TASER CAM" feature, Taser International represents accountability in this way

...we recently developed the TASER CAMTM which is a an integrated video system that records more than 90 minutes of audio and video during a TASER X26 deployment providing yet another layer of accountability. No other law enforcement tool can claim such unique and proven accountability systems that provide a check and balances system in place for each local law enforcement agency (Taser International, December, 29, 2009).

From this perspective, the in-built surveillance technologies make it much more difficult for police officers to misuse this type of device. Whereas baton use, fist strikes, and take downs leave no permanent record (unless they result in obvious injury), Tasers are constructed as technologically sophisticated devices that record each and every time the device is used. Moreover, when the camera and audio are used, the specific circumstances of the deployment are also captured and preserved. More importantly, this information can be accessed by supervisors or other oversight agents. Ultimately, Taser supporters tend to represent the device a force technology tool that allows police officers to be held more accountable for their force decisions than just about any other force technology.

Opponents

Like the other two previously mentioned themes, Taser opponents have not sought to avoid the proponent's constructions concerning the accountability features of the Taser-related devices. Quite the contrary, the

proponents of the device have actively adopted the accountability themes used by the proponents of Tasers, though they have over time sought to re-fashion these claims in a way the undermines support for the devices. Instead of constructing these technological features as viable tools for regulating and monitoring the use of the Taser, opponents have sought to shift the construction from technical accountability to substantive accountability. In this, opponents recognize that while the technological accountability mechanisms exist, they claim that here is no evidence that police departments actually use them. As one opponent argued

There's a capacity to download data now and it's not being fully used...What guarantees are there that this new technology will be used to prevent the abuse of Tasers? (Hampton, Sept. 9, 2005).

So while the supporters of Tasers tend to emphasize the accountability potential of Tasers, opponents tends to emphasize the lack of clear evidence that that potential is being used. Central to this strategy is the claim that police departments do not allow the public to have access to Taser deployment data, and that this makes it impossible for the public to assess whether police officers are actually be held accountable for how they use Tasers. Portland Copwatch makes this argument when they claim that police departments generally try to avoid sharing information about how they use Tasers

...Tasers have inbuilt chips which record use, details of police use of weaponry is not made available to the public and as no organization is funded to routinely obtain these details, they remain hidden from the public.. (Perth Indy Media, 2007)

By offering this claim, opponents seek to refashion the issue of Taser accountability so that it moves from being a debate about whether individual officers can be sanctioned for misusing Tasers, to a larger debate about institutional accountability. In making this argument, Taser proponents argue that substantive accountability resides not just in the technological potential of the device, but in the actual practice of having police analyze and report on patterns of Taser use. For example, one Canadian Taser opponent claims that for accountability to exist, Taserusemustbe routinely reported to the public

"... the cops are going to have to submit reports back to the province about when Tasers were used. These reports are essential and should be part of the public record - how were these not collated before? Situations where Tasers have been used need to be analyzed so we can actually determine when and how the police are using (and abusing) these weapons. There needs to be a public accountability how Tasers have been used, instead of just the standard response (to date) of brushing it under the carpet and blaming "excited delirium." (Zaugg, August 1, 2009)

From this perspective, Taser opponents have raised the possibility that police departments will willfully ignore or purposely lose incriminating data that may have been captured by a Taser. In making this argument, Taser opponents have shifted the focus of the debate away from the individual technical merits of the device and rekeyed the discussion so that it focuses on what they represent as the larger systemic shortcomings of Western forms of police accountability.

Discussion

Until recently, very little social science research has examined electroshock technology and policing. With the rapid proliferation of Tasers and similar devices among police departments, more research is beginning to emerge that investigates the role of these devices on policing practices. To this point, we have learned a great deal about its potential health consequences (Kaminski 2009) and its effectiveness in the field(GAO 2005; Smith et al., 2009). While informative, such studies do not illuminate how these devices have been represented in the

public sphere nor do they help us understand why Tasers have remained controversial. To fully grasp the social and ideological dynamics present in the discursive struggle over Tasers, researchers must move past simply examining the technical features and merits of the Taser. Such studies do not capture the underlying power struggles that underlie public controversies over policing tactics and technologies.

This article has sought to move beyond the traditional technical discussion of Tasers and have focused on how groups have struggled discursively to publicly define the "reality" of Tasers and police use of less lethal force. Overall, we believe that examining these types of struggles can be important for a several different reasons. First, exploring these types of public conflicts can help us understand the interactive nature that underlies the public construction of social problems. We focused in this paper on the claim-and-response nature of the public struggle over Tasers in part because it addresses a number of shortcomings in the available literatures on the construction of public problems. That is, researchers who work on the social construction of social problems rarely pay attention to either interactive way in which public problems emerge (Benford and Hunt 2003). By doing this we have been able to explore how groups use claims and counter claims to interactively compete over the construction of public problems in the social problems marketplace. To be sure, more work is needed in this area. For example, we only focused on two stages of this interactive process. Moreover, we believe that more work is needed in relation to how different types of actors interact in this type of claims competition. For example, it is clear that profit-seeking manufacturers played an important role in the early construction of Tasers. Future work should explore the role of corporations in the construction of technological solutions to crime and justice-related social problems.

Second, we believe that focusing on the struggle over Tasers also tells us something about power dynamics in public conflicts over police tactics and technology. Within the social constructionist literature, researchers often focus on the discursive claims of the powerful. Yet, relatively little attention has been devoted to the strategies that less powerful claims makers can use to resist the claims of better resourced discursive opponents. Through this research, we were particularly interested in exploring how Taser opponents used keying in an attempt to undermine the public claims of Taser manufacturers and police departments. By employing this type of tactic, the opponents of Tasers were able to adopt the claims that had been advanced previously by the supporters of Tasers, and systematically redefine in a radically different way that supports social action against Tasers. Thus, while the supporters of Tasers devoted significant discursive resources to constructing Tasers as effective and accountable, opponents were able to adopt those same themes and re-work them so that Tasers appeared to be dangerous, unsafe, and a type of technology that makes the police less accountable to the public. While we make no judgments about how effective opponents have been in using this particular tactic, the ongoing controversy over Tasers seems to indicate that opponents have enjoyed some measure of success in opposing the claims of Taser proponents.

Finally, by focusing on the interactive nature of the struggle, we are able to move beyond the assumption that the controversy over Tasers is simply the result of the public's ignorance of the device's technological potential. By focusing on the interactive nature of the struggle, we can begin to see that it is really a moral struggle that involves issues that extend well beyond the specifics of the device. Decisions about whether or not to adopt and use specific types of force technology by the police can often be framed as purely professional and technical decision. Yet, these seemingly neutral policy decisions often involve political and ideological choices, and which disproportionately impact some groups more than others. And, perhaps more importantly, these types of policy choice can serve some interests more than others. Thus, for the proponents of the device, Tasers are represented as a tool that makes policing easier and safer for officers. That is, it is a type of technology that gives them the ability to more easily control individuals without having to resort to forms of violence that increase the likelihood of officer injury. For opponents, however, the struggle over Tasers is really a struggle to bring about more democratic and accountable forms of policing. While human rights groups have long pushed for the development of non-lethal forms of force technology, they have forcefully represented Tasers as a tool that promote political repression by making it too easy for departments and officers to use of physical force.

In focusing on these issues, it is important for us to note that we are not ourselves making the claim that one group is "right" or that another group is "wrong" about the place of electroshock technology in modern

policing. Instead, we believe that debate over Tasers has broad implications for democratically accountable policing. While we accept that Tasers may have an important place among the array of tools that are available to police officers, we also believe that the public should have a say as to the manner in which police use serious force. While there is often a desire on the part of police departments to claim professional and occupational privilege when it comes to decisions about how policing is conducted in America, we would argue that the concerns of rights groups and police watchdog groups have tended to be too easily dismissed. As we noted previously, human rights groups have routinely argued that the seductive power of Tasers raises the possibility that officers will be tempted to use them in situations where that type of force is unjustified. Supporters of Tasers have long insisted that the technological accountability mechanisms built in to Tasers ensure that officers will use them only when necessary. Yet, a recent study funded by the National Institute of Justice found that, even with these technological features, patterns of Taser use indicate that officers may be overusing the technology and deploying it for relatively minor forms of resistance (Smith et al. 2009).

Even beyond the prescience of rights groups, however, there are practical reasons to take seriously the public controversy over Tasers and police use of force—How Tasers are constructed publicly has important implications for the perceived legitimacy of both the police and government generally. There is a growing body of work that demonstrates that a community's willingness to obey laws is based, at least in part, on their judgments about the legitimacy of the system of laws and the institutions that enforce those laws (Tyler 1990; Tyler and Ho 2002). And even though Tasers were initially developed as a means of avoiding the deployment of deadly force and the legitimacy crises that accompany serious force, it is clear that Tasers remain an import source of tension in modern policing. While it might be tempting to claim that the public just "doesn't understand" or that the controversy is driven by a news media hungry for dramatic storylines, we would argue that police departments need to take seriously and act on the concerns of human rights and police watchdog groups. Until police departments act on the concerns of community groups, it appears unlikely to us that the public controversy over less lethal force will go away.

References

- Adams K and Jennison V (2007) What we do not know about police use of Tasers. *Policing: An International Journal of Police Strategies & Management* 30: 447-65.
- Altheide, D. (2000) 'Tracking Discourse and Qualitative Document Analysis;, Poetics 27(5): 289-99.
- Amnesty International (2003) *The Pain Merchants: Facts and Figures*. London: Amnesty International. Retrieved April 4, 2008 (http://www.amnesty.org/en/library/info/POL30/027/2003/en).
- Amnesty International (2004) Excessive and lethal force? Amnesty International's concerns about deaths and ill-treatment involving police use of taser. Retrieved April 4, 2008. (http://www.amnesty.org/en/library/info/AMR51/139/2004).
- Amnesty International (2008) *Amnesty International's concerns about Taser* wise: Statement to the U.S. Justice Department inquiry into deaths in custody. Posted January 21, 2008 (http://www.amnestyusa.org/document.php?id=engamr511512007).
- Ashley S(2006) The truth about TASERs: Don't believe everything you read. *Officer.com*.Retrieved April 4, 2008. (http://www.acute.net/productreview files/the%20truth.pdf)
- Benford R and Hunt S (2003) Interactional dynamics in public problems marketplaces: Movements and the counterframing and reframing of public problems. In: Holstein J and Miller G (eds.) *Challenges and Choices: Constructionist Perspectives on Social Problems*. Hawthorne, NY: Aldine de Gruyter, 153-186
- Best J (1995) Constructionism in Context. In: Best J (ed.) *Images of Issues: Typifying Contemporary Social Problems*. New York: Aldine de Gruyter.

- Best J (2001) *How Claims Spread: The Cross-National Diffusion of Social Problems*. Hawthorne, NY: Aldine de Gruyter.
- Bittner E (1990) The police on skid row. In: Bittner E (ed.) *Aspects Police Work*. Northeastern University Press, 30-62
- Blain M(2005) The politics of victimage: Power and subjection in a US anti-gay campaign. *Critical Discourse Studies* 2(1): 31 50.
- Brodeur J (2005) Violence and the police. In: HeitmeyerW and Hagan J (eds.) *International Handbook of Violence Research* (pp.207-224). New York: Springer.
- Burch E (2007) SHOCK ME: Our community responds to Tasers. Retrieved October 23, 2007. (www.pamphletpress.org/index.cfm?sec=2&story_id=22).
- Chermak S (2009) Conducted energy devices and criminal justice policy. *Criminology & Public Policy* 8(4): 861-864.
- Council on Science and Public Health(2009) *Use of Tasers by Law Enforcement Agencies*. Chicago: American Medical Association.
- D.C. Indy Media (2007) Fredrick County deputies kill youth by Taser fire. November 19. Retrieved January 24, 2008. (http://dc.indymedia.org/newswire/display/141640/index.php).
- Fahim, K and Hauser C (2008) Use of Taser broke rules, police suggest. *The New York Times*, September 26, Section B; Page 1.
- Ferretti, F (1976) Fred Ferretti article on popularity of Taser guns. Industry spokesmen comment. *The New York Times*, January 4, Section 6; Page 13.
- Gau J, Mosher C, and Pratt T (2010) An Inquiry into the impact of suspect race on police use of Tasers. *Police Quarterly* 13(1): 27-48.
- Goffman E (1974) Frame Analysis: An Essay on the Organization of Experience. Boston: Northeastern University Press.
- Gorman P (2005) US: Torture by Taser. Posted to *Corp Watch: Holding Corporations Accountable*. Retrieved April 4, 2008. (http://www.corpwatch.org/article.php?id=12455).
- Government Accountability Office(2005)*Use of Tasers by Select Law Enforcement Agencies*GAO-05-464. Retrieved June 5, 2009, from http://www.gao.gov/new.items/d05464.pdf
- Gusfield J (1981) The Culture of Public Problems. Chicago: The University of Chicago Press.
- Gusfield J (1996) Contested Meanings: The Construction of Alcohol Problems. Madison: University of Wisconsin Press.
- Hampton M (2005)Taser International to offer camera add-on. *Homeland Stupidity*. November 9. Retrieved October 29, 2009. (http://www.homelandstupidity.us/2005/11/09/taser-international-to-offer-camera-add-on).
- Harada M (2006) City Tasers to be under tight reins: Use limited to SWAT team, but critics still fearing abuse. *The Journal Gazette*. March 6. Retrieved March 24, 2010 (http://www.journalgazette.net/).
- Johnston D (1981) Stop! Or I'll throw my net at you. Police Magazine 4(2): 23-28.
- Kaminski R(2009)Research on conducted energy devices: Findings, methods, and a possible alternative. *Criminology & Public Policy* 8(4): 903-913.
- KoplowD (2006) Non-Lethal Weapons: The Law and Policy of Revolutionary Techniques for Military and Law Enforcement. New York: Cambridge University Press.
- Loseke D (1999) *Thinking about Social Problems: An Introduction to Constructionist Perspectives*. New York: Aldine de Gruyter.
- Lowney K and Best J(1995) Stalking strangers and lovers: Changing media typifications of a new crime problem. In: Best J (ed.) *Images of Issues: Typifying Contemporary Social Problems*. New York: Aldine de Gruyter.
- Lawrence R (2000)The Politics of Force: Media and the Construction of Police Brutality. Berkeley: University of California Press.

- Maxwell J (2004) Qualitative Research Design: An Interactive Approach. New York: Sage.
- Meyer A and Greg G (1992) Nonlethal weapons: where do they fit? Part II. *Journal of California Law Enforcement* 26(3): 53-8.
- Mitang L (1979) Last of the Tasers? The Associated Press. March 30. P.M. Cycle.
- Munetz M, Fitzgerald A, and Woody M(2006) Police use of the Taser with people with mental illness in crisis. *Psychiatric Services* 57(6): 883.
- Nadel J (1977) Rejected by law enforcement as impractical, the 50,000-volt Taser stun gun is getting a fresher look and new name... *The Associated Press*, May 4, Dateline: Los Angeles.
- National Institute of Justice (2008) *Study of Deaths Following Electromuscular Disruption: Interim Report.*Washington, D.C.: Office of Justice Programs, U.S. Department of Justice.
- New York Times. (1981) Los Angeles Police Get Nonlethal Arms. New York Times September 28, Section 1, pg. 28.
- Perth Indymedia (2007) All WA police to carry stun guns. June 26. Retrieved January 24, 2008 (http://perth.indymedia.org/).
- Pfohl S (1977) The 'Discovery' of Child Abuse. Social Problems 24: 310-323.
- Pittsburgh Indy Media (2005) *It's Not Just Here*. August 24.Retrieved April 3, 2008 (http://pittsburgh.indymedia.org/news/2005/08/19784_comment.php#28253).
- Portland Copwatch. (2003) Police Continue to Shock with Tasers. January.Retrieved June 20 2009. (http://www.portlandcopwatch.org/PPR28/tasersppr28.html).
- Rappert B (2003)Non-lethal Weapons as Legitimizing Forces?: Technology, Politics, and the Management of Conflict. London: Frank Cass.
- Sasson T(1995)Crime Talk: How Citizens Construct a Social Problem. Hawthorne, NY: Aldine de Gruyter.
- Smith M, Kaminski G, Alpert L, Fridell J, Macdonald and Kubu B (2009) *A Multi-Method Evaluation of Police Use of Force Outcomes*. Washington, D.C.: National Institute of Justice.
- Smith R (1997) Reducing violence. In: Alexander J Spencer D Schmirt S and Steele (eds.) Proceedings of Security Systems and Non-Lethal Technologies for Law Enforcement. Boston: The International Society for Optical Engineering.
- Snow D, Rocheford E, Worden S, and BenfordE(1986) Frame alignment processes, Micro mobilization, and movement participation. *American Sociological Review* 51: 464-481.
- Spector M and Kitsuse J (1977) Constructing Social Problems. Menlo Park, CA: Cummings.
- Tasertron.com. (2000) June 15.Retrieved from Internet Archive on June 20, 2009 (http://web.archive.org/web/20000615121025/http://www.Tasertron.com).
- Taser International, Inc. (2001) Feb. 4. Retrieved from Internet Archive on June 20, 2009 (http://web.archive.org/web/20010206173637/Taser.com/m18.htm).
- Taser International, Inc. (undated) Advanced Taser Promotional Video.Reviewed August 25, 2009 (http://www.youtube.com/watch?v=QhkE3VTuPhk).
- Taser International, Inc. (2001) Taser. Jan. 4. Retrieved June 19, 2009
 - (http://web.archive.org/web/20010118043300/Taser.com/lawenforcement.html
- Taser International, Inc. (2003) Advanced Taser Summaries with Q & A. Aug. 4. Retrieved from Internet Archive on June 26, 2009 http://web.archive.org/web/20030804122000/ http://www.taser.com/technical/Q%26A%20with%20summary.doc)
- Taser International, Inc. (2004) Dataport. March 12. Retrieved June 26, 2009
 - http://web.archive.org/web/20040312004843/www.Taser.com/pages/products/usb.html).
- Taser International, Inc. (2004) Electro-Muscular Disruption Technology. April 14. Retrieved from Internet Archive on June 20, 2009 (http://web.archive.org/web/20040415053619 /www.taser.com/pages/products/emd.html).
- Taser International, Inc. (2007) TASER Device Used to Avoid Tragedy in Edmonton. Dec. 8. Retrieved June 27,

- 2009 (http://phx.corporateir.net/phoenix.zhtml?c=129937&p=NewsArticle&id=1090204).
- Taser International, Inc. (2008) Law Enforcement Overview. March 26. Retrieved June 26 2009. (http://www.taser.com/Pages/le_overview.aspx).
- Taser International, Inc. (2008) TASER® Electronic Control Devices (ECDs): Field Data and Risk Management. Sept. 24. (http://www.ecdlaw.info/outlines/Injury %20Reduction%20Stats%20PUBLIC%2009%2024%2008.ppt).
- Taser International, Inc. (2009) FAQ. Retrieved December 29, 2009 (http://www.taser.com/RESEARCH/Pages/FAQGeneral.aspx)
- Vilke G and Chan T (2007) Less lethal technology: medical issues. *Policing: An International Journal of Police Strategies & Management* 30: 341-57.
- Walker S(2005) The New World of Police Accountability. (2005). Thousand Oaks: Sage.
- Weber M(1964) *The theory of social and economic organization*. (Translated by Henderson A. and Parsons T). New York: The Free Press. (Original work published 1947).
- White M and Ready J (2007) The TASER as a less lethal force alternative: Findings on use and effectiveness in a large metropolitan police agency. *Police Quarterly* 9: 170-91.
- Zaugg, M. August 1, 2009. On Alberta's new Taser regulations.Retrieved October 29 2009. (http://www.markzaugg.com/blogs/archive/2009/08/01/1710.aspx).