

CSI and Forensic Realism

By

**Sarah Keturah Deutsch
University of Wisconsin Law School**

**Gray Cavender
Arizona State University
School of Justice & Social Inquiry**

CSI has consistently been among the top rated television programs since its debut in 2000. What is the secret to its popularity? Our analysis reveals that *CSI* combines the traditions of television's crime genre, especially the police procedural, with a creative sense of forensic realism. *CSI* constructs the illusion of science through its strategic web of forensic facticity. Ironically, although *CSI* depicts unrealistic crimes in a melodramatic fashion, this crime drama does so in a manner that suggests that its science is valid, that the audience understands science and can use it to solve crimes.

Keywords: forensic facticity; TV crime genre; police procedural

INTRODUCTION

CSI: Crime Scene Investigation (CSI) has enjoyed an enviable status in television. Having completed its eighth season, a longevity that is rare in prime time television, this crime drama consistently has been the top rated program in its time slot both in its first run and rerun incarnations (see Nielsen Ratings, June 20-26, 2005; Toff, 7 April 2007: A16). Not only has *CSI* generated two successful spin-off series (*CSI: Miami* and *CSI: NY*), it has pushed forensic science terms and concepts into the popular discourse. Accompanying this diffusion has been the sense that science and the police are virtually infallible.

Crime genre programs have been a staple since television's inception. The success of programs from *Dagnet* to *NYPD Blue* has evidenced the audience's fascination with crime dramas. In one sense, *CSI* has been another program in a long line of television crime dramas, and it has exhibited features common to the genre, for example, plots that were driven by violent crimes and the search for the criminal. At the same time, *CSI's* forensic science theme, which was unique when the program began in 2000, has initiated a trend in television crime dramas toward more realistic portrayals of technology and science in policing. In this paper, we focus on how *CSI* has combined the traditions of the crime genre with a sense of forensic realism through what we call a strategic web of forensic facticity. This web has included the sense of realism that is characteristic of the crime genre, but also its portrayal of science, for example, in

© 2008 School of Criminal Justice, University at Albany
Journal of Criminal Justice and Popular Culture, 15 (1), 2008.

the use of scientific equipment and jargon. Through this web, *CSI* has circulated and validated cultural meanings about crime as a threat to the social order.

CSI is an interesting analytic site, first because of its phenomenal popularity, and second, because of its amalgam of crime genre traditions with the additional dimension of forensic science. Accordingly, in this paper we analyze the content and tactics of *CSI*'s very successful first season.

Television Crime Drama and the Police Procedural

CSI is a part of a long tradition in popular culture: crime has been an enduring genre across media, including television. Genres, which are categories of cultural production, are characterized by stability, i.e., predictable elements that define them, but also by elements that change with the times. Defining features of the crime genre include an emphasis on violent crime, usually murder (Perlmutter, 2000), and protagonists who search for and apprehend the criminal, and with that solution, restore order (Cavender, 2004). Of course, these fictional depictions enjoy a degree of poetic license because they differ from actual crime data. Television crime dramas over-emphasize crimes like murder and under-emphasize more commonplace property crimes. This is understandable from a narrative sense because violent crimes are sensational and visually interesting (Soulliere, 2003). Similarly, presenting crime as a morality play complete with notions of good (heroes) and evil (villains) is an effective storytelling technique (Mawby, 2003). However, this morality play is ideological in nature: it circulates and reinforces cultural meanings about social disorder and criminality (Wilson, 2000:6). As a social institution, the police have the power to classify crime and criminals, and that definitional power becomes even more taken-for-granted when combined with television's storytelling capabilities (Loader, 1997).

Notwithstanding these ideological messages, television crime drama depictions diverge from crime data in many significant ways. Television crime drama tends to over-represent white criminals and victims (Perlmutter, 2000; Eschholz, Mallard and Flynn, 2004). Men are more likely than women to be victims, but crime dramas often feature women victims (see Eschholz, Mallard and Flynn, 2004). Women are more likely to be victimized by acquaintances or intimates, but television often reinforces the belief that women are victimized by strangers (Soulliere, 2003). Although these depictions have persisted for years, the crime genre does change with the times. For example, although the heroes are still usually men, heroism today is more a matter of expertise than the physical strength that defined heroism in television's early days. The quest for justice has changed, too. Today, police detectives like *NYPD: Blue*'s Andy Sipowicz are television's preferred agents of justice. Police drama now dominates television's crime genre. Indeed, police officers may be television's most over-represented profession (Wilson, 2000:2).

To varying degrees, these dramas resemble the police procedural, a crime subgenre which emerged in film after World War II. Early procedurals were based on actual (or seemingly real) crimes which gave them a "realistic aesthetic" (Krutnik, 1991:202). They focused on the inner workings of the police organization, revealing backstage routines and procedures.

Contemporary television procedurals differ somewhat from their predecessors. Compared to *Dragnet's* "just the facts, ma'am" approach, they feature more melodramatic narratives. This is occasioned, in part, through the use of ensemble casts that also allow programs to include women and racial/ethnic minorities as police officers (Wilson, 2005:48). The increasingly melodramatic aspect of police drama is consistent with other trends in prime time television programming (Wilson, 2000; Wittebols, 2004). In crime and other prime time programs, these melodramatic aspects are thought to produce a sense of audience loyalty to programs and characters, and, ironically, a sense of believability in them (Wittebols, 2004: 215).

Despite its use of melodrama, the crime genre is known for its surface realism (Wilson, 2000). The police procedural makes this realism a defining characteristic. Early procedurals incorporated actual crimes into stories that focused on police detectives who pursued the truth through "systematized technological investigative procedures" (Krutnik, 1991:203). Contemporary police dramas like *CSI* affect a forensic realism that owes much to those early procedurals. In an era when the police employ sophisticated science and technology in their work, it is not surprising that police dramas on television also utilize science and technology. The dramatic usage of science and technology maintains the genre's tradition of realism and authenticity.

Perhaps it is ironic to use words like realism and authenticity when discussing a program like *CSI*; it is, after all, a television drama. However, we suggest that *CSI's* success can be attributed to what we call its "strategic web of forensic facticity," a term that we borrow from Gaye Tuchman (1978). Tuchman coined the term "strategic web of facticity" in her analysis of the news, not as a product of objective journalism, but rather as a social construction. For Tuchman, a web of facticity is a strategic, ritualistic practice which ensures that a group of presented facts is seen as credible and objective (1978:86), and that, "when taken together, present themselves as both individually and collectively self-validating" (1978:106). Tuchman also was interested in how the news shapes cultural meanings about such matters as conformity, deviance, and threats to social stability (1978:184). Indeed, she sees not only the news but the entire consciousness industry, including entertainment programming, as supportive of existing social hierarchies (1978:156).

We posit that *CSI* uses a web of facticity to bolster the seeming authenticity and accuracy of its forensic realism even as it disseminates meanings about criminals, their threat to society, and the police who are aligned against them. Through the usage of narrative, gear, and other production techniques, *CSI* advances the perception that something scientific is indeed taking place. The program's construction of science is combined with those conventions that produce the crime genre's sense of realism.

With its emphasis on teamwork, police labs, and police routines, *CSI* resembles earlier television procedurals like *Dragnet* (Mittell, 2004:151). It uses more melodramatic narratives, but also fosters the seeming authenticity of the procedural, in this case, in terms of forensic realism. As a result, *CSI* is a very popular television program, but it also has affected the public consciousness about policing and science.

CSI Synopsis

CSI opens with what its transcripts call a "cold shot," i.e., a shot of the Las Vegas strip, usually at night. This establishing shot depicts a city with which many in the audience are familiar, both in terms of its past, i.e., images of gambling and organized crime, and its current status as a destination for family vacations. These establishing shots function in much the same manner as location shooting in the early police procedural films or in *Dragnet*. The camera then cuts to a crime or a crime scene which acts as a teaser for the week's episode. A series of shots follow which present the regular cast members: Gil Grissom, the head of the CSI unit, and investigators Catherine Willows, Sara Sidle, Warrick Brown, and Nick Stokes. These also are establishing shots, but in terms of the competency of the *CSI* cast.

As the episode unfolds, the *CSI* team is confronted with crimes. Often, they have no information about motive, the criminal, or even the victim's identity. They discover these "unknowns" and solve crimes through a combination of police work, laboratory re-constructions and experiments, and cop/scientific knowledge. All of this occurs amid a careful balance of crime genre staples, melodrama, and forensic science.

METHODOLOGY

Several research questions informed our analysis. We were interested in how *CSI* compared with other television crime dramas. In part, this was a numerical question: what crimes, criminals, and victims were depicted on *CSI*? We also were interested in a more qualitative dimension: were *CSI*'s representations similar to or did they diverge from the conventions of television police dramas? Finally, we were especially interested in the question of how *CSI* created its representations of science and technology.

We conducted a content analysis of *CSI*'s 2000-2001 season. We were interested in the debut season because it established *CSI* as a dominant force in television crime drama. Arguably, the success of the first season as measured by viewer ratings started a trend in television wherein the police increasingly use science and technology in their investigations. We analyzed the episodes from that first season in close detail.

CSI's 2000-2001 season was available through a DVD compilation that included all 23 episodes. The 23 episodes contained a total of 74 cases; the case served as the unit of analysis in our crime statistics section. Our referencing system began with the number 100, the pilot episode, and continued consecutively through the episodes as they appeared in the DVD compilation.

We watched four episodes and used these observations to formulate a code sheet (see Appendix). Because of our research questions, our code sheet was attentive to dimensions of police drama discussed in the literature on television crime programs, e.g., standard elements of police procedurals, and to our interest in understanding how *CSI* employed a web of forensic facticity and created a believable sense that the characters used science to solve crimes. This

was not a large data set so we used one coder, the first author, who has a background both in justice-related research and in chemistry. Accordingly, we did not employ measures of inter-coder reliability that are common with large data sets and multiple coders (Bertrand and Hughes, 2005:200). However, as a methodological safeguard, the second author reviewed a small sample (four episodes) of the first author's coding observations. There was unanimous agreement, which is not surprising given the straightforward nature of the coding, e.g., information about types of crime or dialogue with scientific jargon. The code sheet was organized into three aspects of the programming: (1) crime statistics: types of crimes and demographic details about criminals and victims; (2) crime genre: tactical methods typical of the crime genre such as police procedural concepts; and (3) markers of forensic realism such as scientific equipment and jargon.

The use of code sheets promoted a more systematic analysis (Bertrand and Hughes, 2005:201) and also permitted more efficient coding: many dimensions of interest were quickly checked or circled. The use of a DVD compilation facilitated observations by allowing the coder to pause or rewind the action if longer notes were desired, for example, to capture a piece of dialogue. When coding was completed, we simply tallied numerical data such as the number of murders or the usage of knives as weapons. However, on the more qualitative dimensions of our observations, such as the presence of police procedural elements or of scientific language, we repeatedly read our code sheets, looked for patterns, refined categories, and considered dialogue quotes that we could incorporate into our analysis.

Our analysis has three sections. The first section presents information about the crimes, criminals and victims depicted in *CSI*'s first season. Such a compilation is a standard feature in criminological research about crime genre presentations; it provides a bench mark for comparisons with other programs and across time. In the second and third sections, we present more qualitative data. In the second section, we considered how *CSI* used the conventions of the television crime genre to entertain and to set the stage for forensic realism. In the third section, we considered how *CSI* established and emphasized a web of forensic facticity which strategically validated the show's forensic realism. We follow our analysis with a section wherein we discuss the implications of our findings.

ANALYSIS

Crime Statistics

Interestingly, television crime drama and television news offer similar presentations about crime: both exaggerate violent, personal crimes (Eschholz, Mallard, and Flynn, 2004). As we see in Table 1, during its first season, 72% of *CSI*'s crimes (53 of 74 crimes) were violent (e.g., murder, rape). Although these were the sort of crimes that a *CSI*-type unit would investigate, the depictions paralleled other television crime drama. A miscellaneous category (24% or 18 of 74) included the disposal of a corpse by a funeral director to cut burial costs and the poaching of a gorilla. These crimes added an exotic element to *CSI*'s cases. But, murder was

CSI's crime of choice. The network even marketed reruns of *CSI's* first season with an ad promising: "This weekend's gonna be MURDER." Thus, the remaining statistics pertain to the offenders, victims, and weapons involved in *CSI's* murder cases.

Table 1: Number and Percentage of Types of Offenses¹

Offense	CSI ² (N=74)	
	%	N
Violent Crime	72	(53)
Murder ³	64	(47)
Forcible Rape	3	(2)
Robbery	3	(2)
Aggravated Assault	3	(2)
Property Crime	4	(3)
Burglary	3	(2)
Larceny-Theft	1	(1)
Motor Vehicle Theft	0	(0)
Arson	0	(0)
Miscellaneous	24	(18)
Suicide	3	(2)
Sexual Molestation	1	(1)
Kidnapping	3	(2)
Bombing	4	(3)
Extortion	3	(2)
Accident ⁴	5	(4)
Other ⁵	5	(4)

¹Percentages are based upon the total number of crimes committed during the entire first season.

²Percentages may not add to 100% due to rounding.

³Vehicular manslaughter (Episode 103) and justifiable homicide (Episode 122) were included in the murder category for *CSI*

⁴The accident category includes a boating accident, two inadvertent fires, and a building collapse

⁵The other category includes corpse disposal by a funeral director, drunk driving, spitting, and poaching

Tables 2 and 3 represent the depiction of criminals and victims by gender and race/ethnicity. Seventy-seven percent of *CSI's* murders were committed by males, 19% by females, and 4% by unknown offenders. In terms of race, 87% (41 of 47) of *CSI's* murderers were Caucasian, 6% (3 of 47) were African-American, and 6% (3 of 47) were unknown; no Hispanic murderers appeared in the first season. *CSI's* over-representation of Caucasian murders paralleled the depictions in other television crime programs (Perlmutter, 2000).

Table 2: Number and Percentage of Murder Offenders by Race and Sex

Characteristics	CSI (N=47)	
Sex of Offender	%	N
Male	77	(36)
Female	19	(9)
Unknown	4	(2)
Race of Offender	%	N
Caucasian	87	(41)
African-American	6	(3)
Other	0	(0)
Unknown	6	(3)

Although more than twice as many male (n=31 or 66%) than female victims (n=15 or 32%) were murdered during the first season, *CSI* still over-represented female victims. Such a depiction reproduced television's titillating gender stereotypes. *CSI's* murder victims were overwhelmingly Caucasian (91%). This skew toward Caucasian murder victims was consistent with television crime drama generally (Perlmutter, 2000).

Table 3: Number and Percentage of Murder Victims by Race and Sex

Characteristics	CSI (N=47)	
Sex of Offender	%	N
Male	66	(31)
Female	32	(15)
Unknown	2	(1)
Race of Offender	%	N
Caucasian	91	(43)
African-American	4	(2)
Other	0	(0)
Unknown	4	(2)

Sixty-two percent (n=29 of 47) of *CSI's* murderers knew their victims. However, in 36% (n=17 of 47) of the murders, offenders and victims were strangers. This over-representation of situations in which victims did not know their assailants reflected television's penchant for "stranger danger."

Table 4: Number and Percentage of Weapons Used to Commit Murder

Weapon	CSI (N=47)	
	%	N
Firearms	36	(17)
Knives or cutting instruments	17	(8)
Personal Weapons (hands, fists, feet, etc.)	15	(7)
Unknown or other dangerous weapons (see breakdown below)	32	(15)
Unknown or other dangerous weapons (N=15)		
Type	%	N
Vehicle	4	(2)
Bomb	6	(3)
Other ⁶	19	(9)
Unknown	2	(1)

⁶The other category includes a golf club, club, dingle-dangle, rock, ice pick, curtain sash, ceramic figurine, potholder, and dog

As we see in Table 4, firearms were the most common murder weapons during the first season (36%, n=17); knives were the second most used weapon (17%, n=8). A variety of weapons comprised an "other" category (32%, n=15), e.g., a golf club, a curtain sash. Personal weapons such as fists and feet were utilized in 15% (n=7) of *CSI*'s murders. These personal weapons often were a part of the narrative; they provided incriminating forensic evidence, e.g., a heel impression.

These sensational images were consistent with news depictions and with the conventions of the television crime genre. They were a part of the dramatic narrative that *CSI* employed to lure an audience. In the next section, we offer a qualitative assessment of how *CSI* employed genre conventions to entertain but also to generate loyalty to the program, its cast of characters, and to create a sense that they are smart, competent people who use science to catch criminals.

CSI and the Television Crime Genre

As measured by ratings and longevity, *CSI* has been one of contemporary television's most successful programs. Its success has been attributable, in part, to the long-standing popularity of the crime genre. To tap into the genre's popularity, *CSI* had to meet its audience's genre-specific expectations. For example, as noted in the previous section, it offered its audience a heavy dose of murder, a crime drama staple. *CSI* dealt in other genre conventions. It is expected that protagonists will chase criminals, but increasingly in television crime drama they do so as members of a police organization.

Another genre convention is that crime dramas employ melodrama in their narratives. These melodramatic features entertained but they also enhanced the sense of being backstage with the police, and thus contributed to the program's authenticity.

The Police Organizations

CSI was consistent with the trend toward crime dramas that feature the police organization. It was the police as an organization, not merely individual protagonists, who apprehended criminals. Of course, the various duties that comprise an actual police investigation are divided among many individuals and specializations. On *CSI*, however, the team handled most of the procedures: they processed the crime scene, questioned witnesses and interrogated suspects, collected and analyzed evidence, and ultimately solved the crime.

Television crime dramas have featured the police as an organization for several decades, but there have been narrative shifts in the genre, for example, they increasingly feature melodrama. One standard melodramatic plot device depicts a sense of tension between the protagonist and others. *CSI* employed tension as a plot device during its first season. In some cases, the narrative tension was between Gil Grissom, who headed the unit, and the heads of other police units (Episodes 106 and 111). In Episode 122, Gil was removed from a case for disagreeing with the FBI, but he defied orders, investigated the case, and proved that the FBI had arrested the wrong man. Often tension established the uniqueness of the team. In the first scene of the first episode, a police detective referred to the *CSI* team as "the nerd squad" (Episode 100). Sometimes team members asserted their superiority to other police when it came to solving crime. *CSI* investigator Catherine Willows stressed this superiority to Holly Gribbs, a new recruit. Catherine: "The cops? Forget it. They wouldn't know fingerprints from paw prints and the detectives chase the lie. We solve" (Episode 100). Perhaps the program's writers employed the "tension as uniqueness" device because *CSI*, with its forensic science focus, was a different type of crime drama and they wanted to establish the legitimacy of the investigators.

As noted, contemporary police procedurals feature ensemble casts who include women and members of various racial/ethnic groups. *CSI* followed this trend. Gil Grissom played something of a gruff father figure. His advice to younger subordinates played as a kind of forensic philosophy. In Episode 115, Gil quoted Locard's Exchange Principle (criminals leave a trace of themselves at the scene of the crime, and the crime scene leaves a trace on the criminals; see Ramsland, 2001:3). Gil's masculinity was less a matter of physical strength and more a matter of scientific knowledge (Connell, 1993; Messerschmidt, 1993). *CSI's* depiction of its continuing women characters was perhaps more ambiguous. Two series regulars, Catherine Willows and Sara Sidle, were portrayed as competent crime scene investigators. At the same time, they were still feminized for television. Catherine was a mother and this frequently figured into story lines. In Episode 110, when Catherine's ex-husband reported her to child protective services because she failed to pick up her daughter from dance practice, a colleague attested to the agency that she was a good mom. Catherine and Sara may be forensic scientists, but they were depicted in a manner that was consistent with gender stereotypes.

In terms of race/ethnicity, *CSI* resembled other police programs because, as noted, its criminals and victims were primarily Caucasian. However, one continuing character, Warrick Brown, was an African-American investigator. In Episode 103, his racial status was relevant: he befriended another African-American character.

These melodramatic dimensions are now common in the crime genre, and they were prevalent during *CSI*'s first season. Such scenarios humanized the characters and made them more attractive to the audience. They served to 'de-science' (our term) *CSI*, which made the show more accessible. However, forensic realism was the core of *CSI*'s premise. Accordingly, although it is a television crime drama, *CSI* had to make its presentation of forensic realism seem to be authentic. To accomplish this task, *CSI* adhered to the conventions of realism in the police procedural and also steeped virtually every aspect of the program within the aura of science.

Strategic Web of Forensic Facticity

We adapted Tuchman's idea of a strategic web of facticity (1978:86) and employed it to understand how *CSI* constructed its own strategic web of forensic facticity. Throughout its first season, *CSI* spun an intrinsic web of forensic facticity which (1) bolstered its backstage police realism, (2) validated its science claims, and (3) made scientific crime detection both accessible and fun even as it disseminated and reinforced cultural meanings about criminals and the police.

Police Procedural Realism.

Realism, a characteristic of the crime genre, is a defining feature of the police procedural. *CSI* stressed the systematic procedures of the police as an organization--the Las Vegas Crime Lab--and gave the audience a backstage glimpse of these routines.

Following the procedural tradition, *CSI* used establishing shots of Las Vegas and positioned its protagonists in these scenes which suggested a geographic realism. In such locales, the regular cast members were portrayed as scientists and cops. Indeed, they had a wealth of detective-type knowledge about crime and criminals. Their expertise was depicted at the crime scene when they spotted innocuous clues (cop knowledge) and in the lab (scientific knowledge). In both locations, the audience was privy to backstage behavior and conversations. We saw a smoothly running police organization in which experts, acting as a team, were on the case. In the contemporary world, employers want workers to work as a team.

Consistent with the procedural tradition, *CSI* drew upon real cases. Some, like early procedurals, were drawn from news presentations of sensational crimes, e.g., to cut burial costs, a funeral director trashed a corpse (Episode 105). Others were supplied by *CSI*'s technical consultant, Elizabeth Devine, a former criminalist for the L.A. County Sheriff's Department (LaTempa, 2002). One of her cases appeared in Episode 117. A hit man took money from the client and the target, and then murdered both of them. When he was stranded at the scene of the second murder, he claimed that he was trying to save

the victim with CPR. The explanation failed because the victim's bloody handprint was on the hit man's shirt. This bizarre case resembled a double homicide that Devine investigated; in that case, a bloody handprint also was the killer's undoing.

In the hands of professional writers, these cases increased *CSI's* entertainment value. At the same time, these backstage glimpses at solving "real cases" promoted a sense of realism that was characteristic of the police procedural. Plots based on "real cases" supported Tuchman's (1978:3) observation that news and entertainment media work in tandem to produce a web of facticity, in this case, a web that portrayed the police as legitimate crime solvers. On *CSI*, these cops also were forensic scientists.

Scientific Realism

CSI gave its characters the gear and the knowledge of science. Characters and sets exuded the look of science. First, they dressed the part. Especially in the crime lab, lab coats and other aspects of wardrobe offered a visual display of scientific affiliation. Second, the characters used specialized equipment which suggested science in action. At the crime scene, their gear was more police-oriented, although even here they used specialized chemicals and equipment. When the action shifted to the crime laboratory, the set was equally convincing. The lab housed scientific apparatus, e.g., beakers filled with mysterious liquids and high-tech microscopes. The characters were depicted as knowing how to use this equipment to solve crimes. By using a gas chromatography mass spectrometer, Sara determined that a substance which melted on the timing device of a bomb was polyethylene terephthalate (polyester), which she traced to an orange, polyester Thrift-Right Car Rental coat (Episode 112).

The characters augmented their scientific knowledge by their usage of scientific jargon which further established *CSI's* forensic facticity. Their language covered a vast array of scientific specializations. Gil was proficient in entomology. At a crime scene, he examined insects feeding on a corpse. Gil: "Pupa, stage 3." Jim: "English, I'm not an entomologist." Gil: "It's the third stage of larva metamorphosis. This guy's been dead 7 days" (Episode 100). In another case (Episode 116), Gil identified a woman who was missing for 21 years from a fingerprint taken when she was only four years old. Gil explained: "Since fingerprints are set for life during the fourth month of fetal development, I look beyond the size differential." Gil's usage of terminology such as ulnar loops, recurve, and ridge endings established his expertise. In both the entomology and the fingerprint cases, scientific knowledge linked directly to cop knowledge. Both swatches of dialogue were laced with scientific terms.

In order to enhance this web of forensic facticity, the actors were coached on their articulation of scientific language and the use of specialized equipment by Elizabeth Devine, *CSI's* technical consultant (LaTempa, 2002). They explained the lab equipment as they used it. If the facticity of this forensic equipment was challenged, they reasserted it. When Detective O'Riley called the tool that Gil was using "a toy," Gil retorted, "It is not a toy, O'Riley, it's an electrostatic dust print lifter...it is like a super charged lint remover, only it lifts foot prints" (Episode 107).

Tuchman's (1978) web of facticity offered insights for an understanding of *CSI*'s forensic realism. It was predictable that a television program, especially a police drama that tries to evoke a sense of realism, would use appropriate wardrobe, sets, and dialogue. However, Tuchman's web of facticity, which we adapted for our analysis, suggested that the news consists of ritualistic practices that produce facts that seem to be credible and objective (1978:86). She made an important point about objectivity. For Tuchman, the production of news was a part of the construction of knowledge; although a social construction, when produced by appropriate news gathering procedures, the news claims to be objective fact (1978:178-179). Similarly, one of the most interesting aspects of *CSI*'s web of facticity was that the program privileged the facticity of physical evidence. Like the news, *CSI* presented scientifically gathered evidence as objective fact. Throughout the first season, the dialogue consistently referred to the superiority of physical evidence; it was portrayed as accurate and infallible. A team member put this way: "We are not detectives. We are crime scene analysts. We are trained to ignore verbal accounts and rely instead on the evidence a scene sets before us" (Episode 101). Gil's classic formulation of this position was that they "chase the lie 'til it leads to the truth" (Episode 111). Recall the scene noted earlier wherein Catherine told new recruit Holly Gribbs that, in contrast to the police who chased the lie, the crime scene investigators got to the truth through scientific investigations (Episode 100). They conducted lab experiments and re-enactments which scientifically confirmed their theory of the crime.

These scientific techniques were so successful, the evidence so compelling, that during the first season the investigators solved all but four crimes. And in only two of these were they truly stumped. In Episode 114, a local gambler was found shot to death in a casino elevator. There were too many fingerprints in the elevator to identify the killer, but it seemed to have been a professional hit because a quarter covered the bullet wound to the victim's forehead (cop knowledge). In a case that involved a dismembered gorilla, they could not discover the culprits although they assumed it was poachers because the gorilla was skinned and was missing its head, hands and feet (Episode 121).

Scientific Policing as Accessible and Fun

CSI offered a sense of forensic realism, both the realism of a police procedural and of scientific investigations. However, to maintain its high ratings, its web of forensic facticity also had to be both accessible and entertaining to the audience. It had to be television-friendly.

CSI's narratives placed the audience at the crime scene, interviewing witnesses and suspects or looking for clues. Camera work drew our attention to a witness or to a possible clue. The camera lingered on a suspicious witness or on an investigator's reaction to the witness. At the crime scene, the camera zoomed in with a close-up shot as an investigator saw something of interest, say a quarter on a dead man's head (Episode 114). These techniques called our attention to clues and made it appear as if we also spotted them.

CSI employed similar techniques with the scientific aspects of crime scene detective work. Explanatory dialogue instructed the audience seemingly as it instructed a younger investigator. The investigators sprayed luminol on a suspicious surface and applied a blue light, which caused invisible blood traces to glow. If the luminol did not work, they employed an alternate light source (ALS). In Episode 106, when investigating a crime scene, Gil, the veteran, and Nick, a younger investigator, used luminol and the blue light, but no blood was revealed on a floor. Gil: "Let's try the ALS." Nick: "Why use the alternate light source if luminol didn't pick up anything?" Gil: "Luminol works on the surface. ALS chases the protein molecules in blood. It actually penetrates the wood." As Gil predicted, the ALS penetrated the layers of lacquer and wood, and a blood stain was found on the floor.

Most viewers lack a science background so, in addition to such dialogue, *CSI* used cinematographic effects and visually supplemented its scientific jargon. Executive producer Carol Mendelsohn referred to the practice as "visual storytelling" (LaTempa, 2002). This included close-ups of microscopic evidence and graphic journeys into the human body. As a medical examiner explained a victim's death, viewers took the bullet's perspective as it entered and exited the body; this provided an inner visual of the wounds and damage that the medical examiner described (Episodes 108, 110, and 115). As series creator Anthony Zuiker explained, "the visual image will sell it on *CSI*" (LaTempa, 2002).

CSI's web of forensic facticity was established by its narratives, its dialogue, and the accoutrement of science. Some devices were consistent with the traditions of the police procedural but others were unique to a program which foregrounded science. Together, they produced a sense of forensic realism which suggested that science and police scientists solved crimes, and that the audience was a part of the solution. Just as the news shapes attitudes about politics and economics, a program like *CSI* circulated meanings about crime, the police, and the social order.

DISCUSSION

At the outset, we posed a series of research questions about *CSI*. We hope that through our analysis we reveal how *CSI* maintains its popularity as it foregrounds the use of science and technology in police investigations. We think that our analysis goes beyond understanding a television program, and now turn to these larger implications.

Durkheim (1964) argues that the criminal sanction expresses society's condemnation of criminals and reaffirms the moral boundaries that crime threatens. However, since punishments are no longer public spectacles, in contemporary society it is often the media, including entertainment media that socially condemn fictional criminals (Schattenberg, 1981). The crime genre is like morality plays that reinforce cultural meanings about crime (Cavender and Jurik, 1998).

In this paper, we adapt Tuchman's (1978) web of facticity to understand how *CSI* creates a web of forensic facticity in the portrayal of scientific police investigations. As we note, however, Tuchman's observations do more than explain news as a social construction. For us, the deeper significance of her insights is the understanding that, as the news and entertainment media shape public attitudes, they are doing ideological work: they reinforce social hierarchies; they use procedures that make social constructions appear to be not only objective but taken-for-granted; they preclude alternative viewpoints. Loader (1997) makes a similar point about police in contemporary society. Drawing on Tuchman and Loader, we focus on how *CSI* parallels other police dramas in its representations of crime and the police. *CSI* goes a step further in its representations of science as an investigative tool of the police.

Our analysis provides insights about *CSI*, but there is a need for more research about this very popular television program. One line of inquiry might address the affect of watching *CSI* on various audiences. This could include focus groups with viewers to discover why they watch and how the program influences their views of the police and of science. It might be the case, for example, that watching *CSI* affects how viewers evaluate the performance of the police (see Iyengar and Kinder, 1987). Some research (Hallett and Powell, 1995) suggests that reality crime programs are popular with and affect police officers. Accordingly, focus groups might include criminal justice personnel who watch *CSI*.

Another interesting line of research pertains to the "CSI Effect" in which jurors acquit criminal defendants if prosecutors lack the definitive scientific evidence that is *CSI*'s trademark (Cole and Dioso, 2005). For now, the "CSI Effect" remains largely anecdotal. Indeed, Mopas (2007) is critical because the "CSI Effect" frames the issue as what is real rather than to "concentrate on the interactions between what is presented on TV and what we often describe as the 'real world' of forensics and criminal justice" (2007:110). For Mopas, the interesting research point is the claim, oft-cited on *CSI*, that the evidence speaks for itself. Obviously, whether on *CSI* or in that "real world," scientific evidence does not simply appear; rather, it is developed and used by the police. Mopas' final observation and another worthy line of inquiry pertains to how prosecutors and defense attorneys, knowing *CSI*'s popularity, modify their theory of the case during trial preparation (2007:114-115). That is, regardless of any "CSI Effect," does this popular program have some sort of legal reality for prosecutors and defense attorneys? There are, of course, limitations in the research that we present in this paper. We think the first season is important, but it is only one season. There may have been changes in the program in subsequent seasons or in the spin-off series. Moreover, our analysis focuses in detail on the program; we have no data on its impact on audiences.

In any case, *CSI* is an extremely popular program. Its ratings and its impact on television police dramas make it a worthy site for analysis.

CONCLUSION

CSI resembles a traditional television police drama. Story lines center around violent crime, usually murder, criminals and victims tend to be white, victims are disproportionately women, and elements of melodrama appear in its narratives. While *CSI* does not adopt *Dragnet's* documentary style, its reliance on actual cases and its focus on the routines of policing lend an air of authenticity and mark it as a contemporary television police procedural.

But what makes *CSI* unique, especially in its debut season, is its emphasis on forensic science. Its focus on forensic science combines with the authenticity of the procedural to generate the program's forensic realism. *CSI* generates this sense of realism by engaging in what we call a web of forensic facticity. Adapting a concept borrowed from media scholar Gaye Tuchman (1978), we demonstrate that *CSI* imbues every aspect of the program--set, dress, language, the method for solving crimes--with a sense of science, and with the validity of scientific evidence and of science itself. An aspect of this facticity is that sense of realism that is a characteristic of the police procedural. We are privy to the backstage world of the police, a technique that enhances a sense of reality and audience identification; we, too, seem to have cop and science knowledge. We see the *CSI* unit as a highly functioning organization. As Catherine tells that new recruit, "We solve. We restore piece of mind, and when you're a victim, that's everything" (Episode 100).

The reality, of course, is that, notwithstanding its forensic realism, *CSI* is a television crime drama. Its investigators exhibit almost super human levels of expertise--both cop and scientific knowledge. And while they almost always solve the crime, real criminals do not always confess, the police do not always solve crimes, and when they do, as often as not solutions are based not only on brilliant scientific investigatory work but on citizens' tips (Ericson, Baranek, and Chan, 1991). Indeed, as we know from the daily newspaper, neither the police nor science are infallible. There are breaches in the chain of evidence, delays in laboratory results, and interpretations of laboratory reports that are equivocal and occasionally dishonest.

And yet, *CSI* is consistently the top rated program in its time slot. Perhaps it provides the closure that is always a part of the crime genre. Crimes are solved, victims are avenged, and order is restored. But, *CSI* is fiction; its web of forensic facticity is a social construction. Of course, so is the news (Tuchman, 1978). Crime fact and crime fiction are similar in their depictions of crime (Eschholz, Mallard, and Flynn, 2004). The problem with this, as criminologists have long noted, is that, taken together, news and crime drama have the potential to generate a misunderstanding about issues of crime. These media presentations provide a kind of ideological closure that cloaks the infallibility of the police with the mantle of science. Such closure tends to forestall critical questions about policing in the United States.

REFERENCES

- Bertrand, I., Hughes, P. (2005). *Media Research Methods: Audiences, Institutions, Texts*. London:Palgrave/Macmillan
- Cavender, G. (2004). Media and Crime Policy: A Reconsideration of David Garland's The Culture of Control. *Punishment & Society*, 6(3) 335-348.
- Cavender, G., Jurik, N. (1998). Jane Tension and the Feminist Police Procedural. *Violence Against Women* 4.10-29.
- Cole, S., and Dioso, R. (2005). Law and the Lab. *Wall Street Journal*, 13 May.
- Connell, R. (1993). The Big Picture: Masculinities In Recent World History. *Theory and Society*, 22 597-623.
- Durkheim, E. (1964). *The Division of Labor in Society*. New York: The Free Press.
- Ericson, R., Baranek, P., Chan, J. (1991). *Representing Order: Crime, Law and Justice in the News Media*. Toronto: University of Toronto Press.
- Eschholz, S., Mallard, M., Flynn, S. (2004). Images of Prime Time Justice: A Content Analysis of *NYPD Blue* and *Law and Order*. " *Journal of Criminal Justice and Popular Culture*, 10 (3) 161-180.
- Hallett, M., Powell, D. (1995). Backstage With Cops? The Dramaturgical Reification of Police Subculture in American Crime Info-tainment. *American Journal of Police* 14, 101-129.
- Iyengar, S., Kinder, D. (1987). *News That Matters: Television and American Opinion*. Chicago: University of Chicago Press.
- Krutnik, F. (1991). *In a Lonely Street: Film Noir, Genre, and Masculinity*. London: Routledge.
- LaTempa, S. Oct. 2002. The Women of *CSI*: Tough Girls Do Dance. Retrieved February 17, 2005. <http://www.wga.org/WrittenBy/1002/csi.html>.
- Loader, I. (1997) Policing and the Social: Questions of Symbolic Power. *British Journal of Sociology* 48. 1-18.
- Mawby, R. (2003). Completing the 'Half-Formed Picture'? Media Images of Policing, in Paul Mason (ed.), *Criminal Visions: Media Representations of Crime and Justice*, 214-237. Cullompton: Willan Publishing.
- Messerschmidt, J. (1993). *Masculinities and Crime: Critique and Reconceptualization of*

- Theory*. Lanham: Rowman & Littlefield.
- Mittell, J. (2004). *Genre and Television: From Cop Shows to Cartoons in American Culture*. London: Routledge.
- Mopas, M. (2007) Examining the 'CSI Effect' through an ANT Lens. *Crime Media Culture* 3. 110-117.
- Nielsen Ratings. 26 June 2005. Top Ten Primetime Broadcast TV Programs. *Nielsen Media Research, Inc.*
http://www.nielsenmedia.com/ratings/broadcast_programs.html.
- Perlmutter, D. (2000). *Policing the Media: Street Cops and Public Perceptions of Law Enforcement*. Thousand Oaks: Sage.
- Ramsland, K. (2001). *The Forensic Science of C.S.I.* New York: Berkley Boulevard Books.
- Rapping, E. (2003). *Law and Justice as Seen on TV*. New York: New York University Press.
- Schattenberg, G. (1981). Social Control Functions of Mass Media Depictions of Crime. *Sociological Inquiry* 71-77.
- Soulliere, D. (2003). Prime-Time Murder: Presentations of Murder on Popular Television Justice Programs. *Journal of Criminal Justice and Popular Culture*, 10(1). 12-38.
- Toff, B. (2007). Crime Pays. *New York Times*. April 7, p. A16.
- Tuchman, G. (1978). *Making News: A Study in the Construction of Reality*. New York: Free Press.
- Wilson, C. (2000). *Cop Knowledge: Police Power and Cultural Narrative in Twentieth-Century America*. Chicago: University of Chicago Press.
- Wilson, C. (2005). Let's Work out the Details: Interrogation and Deception in Prime Time. *Journal of Criminal Justice and Popular Culture*, 12 (1) 47-64.
- Wittebols, J. (2004). *The Soap Opera Paradigm: Television Programming and Corporate Priorities*. Lanham: Rowman & Littlefield Publishers.

ENDNOTE

Sarah Deutsch graduated summa cum laude from Arizona State University and the School of Justice & Social Inquiry in 2004 and graduated from the Barrett Honors College in

2005. Ms. Deutsch is studying law at the University of Wisconsin Law School where she is interested in public interest law.

Gray Cavender is a Professor in Justice & Social Inquiry at Arizona State University. He teaches courses on Media, Law & Society, and Punishment. His primary research interest is in the media, and includes topics ranging from reality television to how the media depict crime. Recent publications include several articles about the British made-for-TV *Prime Suspect* films.

APPENDIX

Main Characters Present

_____ Gil Grissom _____ Nick Stokes _____ Warrick Brown
_____ Catherine Willows _____ Sara Sidle _____ Jim Brass
_____ Greg Sanders _____ Al Robbins

Emotional Connection

Forensic Facticity

Clothing/Appearance:

Lab coat/Apron Goggles Gloves ID Badges Briefcase Masks
Other _____

Tools/Equipment:

Tweezers Luminol Fluorescence/Lights Adhesives Flashlight

Vial/Test Tube Camera Dusting Brush Dusting Powder Plasters

Chromatography Spectrophotometer Spectrograph Centrifuge Microscope

Other _____

Language/Scientific Jargon:

Special Graphical Features

Reinforcement of Evidence

CSI/Law Enforcement Tension

Crime 1: _____

Team: _____

Type of Investigation/Crime

Homicide Suicide Rape Molestation Kidnapping Robbery Bombing Accident

Other _____

Perpetrator

Sex: M F Unknown

Race: White Black Hispanic Asian Native American Other _____

Relationship to Victim: Stranger Acquaintance

Victim

Sex: M F Unknown

Race: White Black Hispanic Asian Native American Other _____

Weapon

Gun Knife Hands Rope Vehicle None Other_____

Details/Observations

Crime 2: _____

Team:

Type of Investigation/Crime

Homicide Suicide Rape Molestation Kidnapping Robbery Bombing Accident

Other_____

Perpetrator

Sex: M F Unknown

Race: White Black Hispanic Asian Native American Other_____

Relationship to Victim: Stranger Acquaintance

Victim

Sex: M F Unknown

Race: White Black Hispanic Asian Native American Other_____

Weapon

Gun Knife Hands Rope Vehicle None Other_____

Details/Observations: