

An Indirect-Effects Model of Mediated Adjudication: The *CSI* Myth, the Tech Effect, and Metropolitan Jurors' Expectations for Scientific Evidence

Hon. Donald E. Shelton^{*}, Young S. Kim[†], and Gregg Barak[‡]

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^{*}Donald E. Shelton has been a felony trial judge in Michigan for 19 years and is an adjunct faculty member in the Criminology and Political Science Departments at Eastern Michigan University. He received his J.D. from the University of Michigan Law School; his M.A. in Criminology from Eastern Michigan University, and his B.A. from Western Michigan University.

[†]Young S. Kim is an Assistant Professor of Criminology at Eastern Michigan University. He received his Ph.D. in Crime, Law and Justice from Pennsylvania State University in 2001..

[‡]Gregg Barak is a Professor of Criminology & Criminal Justice at Eastern Michigan University and Distinguished Visiting Professor of the College of Justice & Safety at Eastern Kentucky University. His Ph.D., M. Crim, and A.B. are all from the University of California at Berkeley.

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Introduction

After a jury acquittal, the prosecutor explains the loss to the assembled media by saying that the jurors demanded too much of the government. They “wrongfully” acquitted the defendant only because the television show, *CSI*, or its spin-offs and copycats, overly influenced them. The jurors, according to the prosecutor, could not separate reality from fiction when they did not see the same kinds of advanced scientific evidence during the trial as are commonly depicted on their television screens. The popular media quickly coined such common prosecutorial anecdotal complaints as the “*CSI* effect,” and this term has been repeated and republished since *CSI* aired eight years ago. The 2006 study documented that deluge of popular media repetition,⁴ and it has continued essentially unabated.⁵ The popular media has almost universally accepted the prosecutor’s explanation for such jury acquittals as true, and has helped to construct the “*CSI* effect” as a serious problem for the criminal justice system and a threat to the very sanctity of the jury system.

The genesis of this “*CSI* effect” on jury acquittals was anecdotal and subjective, and based primarily on the opinions of prosecutors, judges, and other law enforcement officials. In 2006, we tested the validity of this popular notion and conducted the first empirical study of the alleged “*CSI* effect” on summoned jurors (the “Washtenaw County study”). That study involved a survey of 1,027 summoned jurors in Washtenaw County, Michigan about their television-watching habits, expectations for scientific evidence in particular types of cases, and their likely verdicts in those particular cases when faced with scenarios featuring various types of evidence.

⁴ See Donald E. Shelton, Young S. Kim, and Gregg Barak, *A Study of Juror Expectations and Demands Concerning Scientific Evidence: Does the “CSI Effect” Exist?*, 9 Vand. J. Ent. & Tech. L. 331 at 335-336 (2006)

⁵. Most recently, Simon Cole and Rachel Dioso-Villa have collected data documenting the continuing media use of the phrase in what they call “*CSI* effect discourse”. Simon A. Cole and R. Dioso-Villa, *Investigating the “CSI Effect” Effect: Media and Litigation Crisis in Criminal Law*, 61 Stan. L. Rev. 1335 (2009).

The data in that study showed that jurors had increased expectations for scientific evidence, and that, particularly in cases based on circumstantial evidence without eyewitness testimony, jurors would be more likely to acquit a defendant if the government did not provide some form of scientific evidence. However, the Washtenaw County study data also showed no significant correlation between those expectations and demands and whether the jurors watched *CSI* or similar programs on television.⁶ We speculated that the cause of these heightened juror expectations and demands was a broader change in our popular culture regarding the use of modern science and technology, buttressed by media portrayals of those scientific advances. We suggested that these changing expectations and demands could more accurately be called a “tech effect.”⁷

As with all quantitative behavioral research, questions about the representativeness of the subjects, and therefore the generalizability of the research findings and their broader implications, are appropriate. For example, Washtenaw County is a suburban county in southeast Michigan with a large university population. The demographics of the jurors included a very high educational level consistent with that setting. Controlling for individual demographic characteristics within that population, however, can only provide limited additional information. We thought it important, therefore, to undertake a similar survey, again involving adults summoned for jury duty, but administer it in a different jurisdiction. This follow-up study (the “Wayne County study”) surveyed jurors in Wayne County, which is centered in Detroit and is the most populous jurisdiction in Michigan. It is a truly metropolitan jurisdiction, as

⁶ Shelton, et al, *supra* note 4, at 367.

⁷ “It is clear, however, that jurors do significantly expect that prosecutors will use the advantages of modern science and technology to help meet their burden of proving guilt beyond a reasonable doubt. This article suggests that the origins of those expectations lie in the broader permeation of the changes in our popular culture brought about by the confluence of rapid advances in science and information technology and the increased use of crime stories as a vehicle to dramatize those advances.” Shelton, et al, *supra* note 4, at 364 (describing the “tech effect”).

distinguished from the more suburban, university setting in Washtenaw County. The racial, educational, income, and other demographics of the jurors in Wayne County are significantly different from the demographics of the jurors in Washtenaw County. Similar results in the Wayne County study to the Washtenaw County study, given the differences in the studies' populations, would therefore lend support to the findings in Washtenaw County. Contradictory results could suggest a need to further examine geographic and demographic characteristics as they relate to the so-called "CSI effect" to determine the correlation between geography, demographics, and jurors' perceptions of forensic evidence in trials.

The Wayne County study also explored the suggestion of a broader "tech effect" rather than a "CSI effect" or even a more general "media effect" acting alone, or possibly in combination, as the causative agent for the increased juror expectations and demands seen in the Washtenaw County study. Thus, the juror questionnaire in the Wayne County study included additional questions that would gauge the jurors' knowledge and use of modern technology, their interest in criminal justice news and development, their assumptions about the availability of modern forensic science capabilities in their local police crime laboratories, and their expectations about how and when those capabilities would be used.

The "tech effect" influences jurors' expectations and demands as does the effect of mass media portrayals of crime and criminal justice. However, the belief in CSI-related acquittals, often characterized as the "strong prosecutor" version of the "CSI effect,"⁸ is predominant among prosecutors, judges, some defense attorneys, and other law enforcement personnel.⁹

⁸ Cole and Dioso-Villa, *Investigating the "CSI Effect" Effect: Media and Litigation Crisis in Criminal Law*, *supra* note 5.

⁹ *Id.*

Furthermore, their perception that some acquittals are caused by watching *CSI*, whether justified or not by empirical evidence, affects their trial conduct and therefore may impact eventual juror deliberations or verdicts. We suggest that eventual juror responses to scientific evidence or the lack thereof are likely not directly related in a causative, linear fashion to any of these effects alone, but rather to an indirect-effects model¹⁰ of mediated adjudication in which these and many other factors play a part. In other words, a “*CSI* effect,” a “tech effect,” or a “mass media effect,” alone or in combination, represents just a few of the more conspicuous social features that may, in interaction with a variety of other cultural and individual factors, affect the outcomes of criminal adjudication.

Part I of this article defines the “*CSI* effect” as used throughout this article, given that the phrase has come to have many different meanings ascribed to it. It emphasizes the epistemological importance of first describing the effect of the “*CSI* effect” as observed in juror behavior documented in the Washtenaw and Wayne County studies, and then looking at causative factors that may be related to an explanation of those observed effects. Part II describes the methodology of the Wayne County study, provides a descriptive analysis of Wayne County jurors, and compares the jurors demographically to the Washtenaw County jurors who were surveyed in 2006. Part III analyzes the Wayne County study results with respect to jurors’ expectations and demands for scientific evidence. The Wayne County study findings reinforce the earlier Washtenaw findings of heightened juror expectations and demands for scientific evidence in almost every respect. This most recent analysis of the impact of viewing *CSI* or similar programs on jurors in Wayne County likewise reinforces the conclusions from the earlier

¹⁰ See Malamuth, Neil M. (1989) “Sexually Violent Media, Thought Patterns, and Antisocial Behavior.” *Public Communication and Behavior*, vol 2 pages 159-204.

Washtenaw County study that there is no such causative relationship between watching *CSI* and the heightened expectations and demands of jurors. Part IV explores the nature of the “tech effect” as one causative factor for those heightened juror expectations and demands as an alternative to the “*CSI* effect.” It also proposes an indirect-effects model of juror influences that combines the perception of a “*CSI* effect” with the “tech effect” of modern scientific advances and the generalized effect of media portrayals about crime.¹¹ This model triangulates the potential interactive effects of a “*CSI* effect” myth with the likelihood of a “tech effect” in the context of the “mass mediated effects” of law and order or crime and justice news. The results of regression analyses of data from Wayne County jurors provide some support for the 2006 study’s suggestion of a “tech effect” -- that the broader changes in popular culture brought about by rapid scientific and technological advances and widespread dissemination of information about them is a more likely explanation for increased juror expectations and demand for scientific evidence in the courtroom than simply viewing *CSI* or related programs. Part V provides an overview of contemporary perspectives of “mass-mediated effects” on public attitudes, behaviors, and expectations as a prelude to the indirect-effects model of mediated adjudication.

The “tech effect” influences juror expectations and demands as does the effect of mass media portrayals of crime and criminal justice. However, the authors also recognize that the belief in *CSI*-related acquittals, often characterized as the “strong prosecutor” version of the “*CSI* Effect,” is predominant among prosecutors, judges, some defense attorneys, and other law enforcement personnel.¹² Furthermore, their perception that some acquittals are caused by

¹¹ See pp. 45 - 48, *infra*.

¹² Cole and Dioso-Villa, *Investigating the “CSI Effect” Effect: Media and Litigation Crisis in Criminal Law*, *supra* note 5.

watching *CSI*, whether justified or not by empirical evidence, affects their trial conduct and therefore may impact eventual juror deliberations or verdicts. We suggest that eventual juror responses to scientific evidence or the lack thereof are likely not directly related in a causative, linear fashion to any of these effects alone, but rather to an "indirect-effects" model of mediated adjudication in which these and many other factors play a part. In other words, a *CSI* effect, a tech effect, or a mass media effect, alone or in combination, represents just a few of the more conspicuous social features that may, in interaction with a variety of other cultural and individual factors, affect the outcomes of criminal adjudication.

I. Defining the “*CSI* Effect” and the “Tech Effect”

Although popular media coined the phrase, “*CSI* effect,” criminal justice professionals and scholars have used it in a number of different contexts and with a variety of meanings. Professor Cole and his colleague have suggested a typology of different causal claims and effects, including a “strong prosecutor’s effect,” “weak prosecutor’s effect,” and “defendant’s effect,” among others.¹³ There have even been suggestions that criminals who watch *CSI* have learned how to avoid leaving trace evidence and thus circumvent police forensic scientists.¹⁴ For the most part, however, the dominant usage of “*CSI* effect” refers to the allegation that jurors who watch *CSI* or similar television programs expect and demand scientific forensic evidence

¹³ See Simon A. Cole & R. Dioso-Villa, *CSI and its Effects: Media, Juries, and the Burden of Proof*, 41 New Eng. L. Rev. 435 (2007) and Simon A. Cole and R. Dioso-Villa, *Investigating the “CSI Effect” Effect: Media and Litigation Crisis in Criminal Law*, 61 Stan. L. Rev. 1335 (2009). The “defendant’s effect” was originally posited by Professor Tom R. Tyler who suggested any increased credibility jurors give to scientific evidence may endure to the benefit rather than the detriment of the prosecution. Tom R. Tyler, *Viewing CSI and the Threshold of Guilt: Managing Truth and Justice in Reality and Fiction*, 115 Yale L. J. 1050 (2006).

¹⁴ Cole and Dioso-Villa refer to this as the “police chief’s effect”. See Cole and Dioso-Villa, *Investigating the “CSI Effect” Effect: Media and Litigation Crisis in Criminal Law*, *supra* note 5, at p1344.

because they watch these shows, and that jurors “wrongfully” acquit defendants when such evidence is not produced.¹⁵

To address the existence of this so-called “*CSI* effect,” it is necessary to separate and define the claimed effects, including the observable attitudes and actions of jurors with regard to scientific evidence, from the potential causes of that juror behavior, such as watching *CSI*-type programs on television. With respect to the claimed effects, the Washtenaw County study showed high levels of juror expectations and demands that the prosecutor would present scientific evidence. The more recent Wayne County study reinforces those observations and reveals even higher levels of juror expectations for scientific evidence in metropolitan jurors than were documented two years ago in a suburban jurisdiction. Additionally, in keeping with the findings from the Washtenaw County study, the Wayne County study showed that most jurors still appear to trust, perhaps misguidedly, eyewitnesses and will rely on factual testimony to find that the government has met its burden even in the absence of scientific evidence. Thus, jurors are not necessarily prepared to acquit defendants without scientific evidence. In cases where there are no eyewitnesses and the government relies on circumstantial evidence, the observation in Wayne County is consistent with the prior observation in Washtenaw County - jurors are much more likely to acquit if the government’s case does not include some scientific evidence. However, it is not appropriate to characterize such acquittals as “wrongful,” as prosecutors are wont to do when they lose such cases. Researchers have found no evidence of any higher acquittal rate in state courts that could be linked to the so-called *CSI* effect.¹⁶

¹⁵ This is what Cole has typed as the “strong prosecutor’s effect”, although it includes elements of both cause and effect. Simon A. Cole and R. Dioso-Villa, *Investigating the “CSI Effect” Effect: Media and Litigation Crisis in Criminal Law*, *supra* note 7, at 1343.

¹⁶ See Simon A. Cole and R. Dioso-Villa, *Investigating the “CSI Effect” Effect: Media and Litigation Crisis in Criminal Law*, *supra* note 7, at pp. 1356 – 1364, and the other acquittal rate research cited therein.

Data in the Washtenaw County and Wayne County studies have both demonstrated significantly high expectations and demands for scientific evidence by jurors. Other scholars and researchers have found similarly high expectations and regard for scientific evidence by jurors.¹⁷ If these expectations are the “effects,” then what are the causes? Contrary to the prosecutor- and media-promoted idea, the Washtenaw County study data ruled out watching *CSI* or similar programs and showed no causal relationship between jurors’ expectations and demands for scientific evidence and television-watching habits. Subsequently, we refined and extended analysis of the original data pertaining to circumstantial evidence cases and eyewitness evidence cases, performing multivariate regression and path analysis and controlling for individual juror characteristics. This new data analysis reinforced the original data analysis.¹⁸ Neither the Washtenaw County study data nor any other studies involving jurors or potential jurors as subjects have demonstrated a causal relationship between jury verdict behavior and watching *CSI* or other programs in that genre.¹⁹ The Wayne County study reinforces that conclusion - there is no *CSI*-caused effect on jury expectations for scientific evidence that influences their verdicts.

That conclusion, however, merely states the negative. If watching *CSI*-type television programs does not cause juries to acquit defendants in cases without scientific evidence, what

¹⁷ N. J. Schweitzer and Michael J. Saks, *The CSI Effect: Popular Fictions About Forensic Science Affects the Public's Expectations About Real Forensic Science*, 47 *Jurimetrics J.* 357 (2007); Janne A. Holmgren, *The CSI effect and the Canadian jury*, 69 *RCMP Gazette* 30 (2007), available online at www.rcmp-grc.gc.ca/gazette/archiv/vol69n2-eng.pdf (last visited June 6, 2009).

¹⁸ Young S. Kim, Gregg Barak, and Donald E. Shelton, *Examining the “CSI-effect” in the Cases of Circumstantial Evidence and Eyewitness Testimony: Multivariate and Path Analyses*, *J. Crim. Justice* (forthcoming 2009).

¹⁹ See Shelton et al, *supra* note 4; Kimberlianne Podlas, “*The CSI Effect*”: *Exposing the Media Myth*, 16 *Fordham Intell. Prop., Media & Ent. L. J.* 429 (2006); Kimberlianne Podlas, *The “CSI Effect” and Other Forensic Fictions*, 27 *Loy. L. A. Ent. L. Rev.* 87 (2007); Simon A. Cole and R. Dioso-Villa, *Investigating the “CSI Effect” Effect: Media and Litigation Crisis in Criminal Law*, *supra* note 7; Kiara Okita, “*The CSI Effect: Examining CSI’s Effects upon Public Perceptions of Forensic Science*”, Unive. of Alberta Master's thesis, unpublished (2007) (copy on file with authors); Janne Holmgren, “*The CSI Effect and the Canadian Jury*”, **** (forthcoming); Judith Fordham and Janne A. Holmgren, *The CSI Effect in the Australian and Canadian Criminal Justice Systems*, Proceedings of the American Academy of Forensic Sciences, February 2009, available online at www.aafs.org/pdf/2009ProceedingsDenver.pdf (last visited June 6, 2009) and copy on file with the authors; ***

could be the cause of the jurors' heightened expectations and demands for scientific evidence? The lack of a correlation between watching *CSI* and jurors' expectations for scientific evidence does not necessarily mean that watching the plethora of forensic science television shows does not play a role in the juror behavior we have documented. After the Washtenaw County study, we theorized that a "tech effect" causes these heightened expectations and demands. This "tech effect" meant that the origins of heightened juror expectations about scientific evidence lay in "the broader permeation of the changes in our popular culture brought about by the confluence of rapid advances in science and information technology and the increased use of crime stories as a vehicle to dramatize those advances."²⁰ We live in an amazing technological age. The last thirty years have brought about such scientific discoveries and developments that some justifiably have called it a "technology revolution."²¹ These new technologies have been used to create another "information revolution" in the availability and transmission of information.²² These developments in science and information are contemporaneous and interrelated. Advancements in science are fostered by the ability to exchange and transfer information, and scientific

²⁰ Shelton, Kim & Barak, *supra* note 4, at 364.

²¹ In 2001, a Rand Corporation study concluded that "Beyond the agricultural and industrial revolutions of the past, a broad, multidisciplinary technology revolution is changing the world." Phillip S. Anton, Richard Silbergitt, and James Schneider, *THE GLOBAL TECHNOLOGY REVOLUTION: BIO/NANO/MATERIALS TRENDS AND THEIR SYNERGIES WITH INFORMATION TECHNOLOGY BY 2015* (2001) available online at <http://www.rand.org/publications/MR/MR1307>. See also, e.g., J. R. Orkin, *THE TECHNOLOGY REVOLUTION: THE NOT-FOR-DUMMIES GUIDE TO THE IMPACT, PERILS, AND PROMISE OF THE INTERNET* (2005); Richard Silbergitt, et al., *THE GLOBAL TECHNOLOGY REVOLUTION 2020: IN-DEPTH ANALYSIS: BIO/NANO/MATERIALS/INFORMATION TRENDS, DRIVERS, BARRIERS, AND SOCIAL IMPLICATIONS* at xvii; Rand Corporation (2006).

²² See Peter F. Drucker, "Beyond the Information Revolution", *Atlantic Monthly*, Volume 284, No. 4, pp. 47-57 (1999); Michael L. Dertouzos, *THE UNFINISHED REVOLUTION: HUMAN-CENTERED COMPUTERS AND WHAT THEY CAN DO FOR US*, 15 (2001).

developments almost immediately become available not only to scientists but also to the entire world.

The information technology system quickly makes scientific discoveries and advancements part of our popular culture. The dissemination is fast and widespread through the media via the Internet, fiction and non-fiction television programs, film, and even traditional news sources. DNA is a prime example, as it has gone from an abstract concept known only to the small biochemical community to a term that even children recognize and use.²³ Ordinary people know, or at least think they know, more about science and technology from what they have learned in the media than they ever learned in school.²⁴ Those ordinary people are the jury system, and they come into court filled with years of information and preconceptions not only about science but also about the criminal adjudication process itself.²⁵

Recent research has offered some support for our "tech effect" hypothesis.²⁶ Okita's detailed regression analysis of the responses of 1,200 Canadian citizens to a random telephone survey "suggest[s] that the 'tech effect' posited by Shelton et al. may indeed relate to respondents having learned about forensic science from a larger body of media than *CSI*, one which also includes

²³ See Thomas G. Gutheil, "What Does DNA Stand For, Daddy?" Or What Does the Law Do When Science Changes?, AAPL NEWSL. (American Academy of Psychiatry and the Law), Sept. 2000, at 4, available at http://www.emory.edu/AAPL/newsletter/N253_DNA.htm (last visited August 26, 2009)

²⁴ See Glenn Reynolds, AN ARMY OF DAVIDS: HOW MARKETS AND TECHNOLOGY EMPOWER ORDINARY PEOPLE TO BEAT BIG MEDIA, BIG GOVERNMENT, AND OTHER GOLIATHS (2007).

²⁵ Shelton, Kim & Barak, *supra* note 4, at 362-63 (citations omitted).

²⁶ Okita, *supra* note 12.

movies and other fictional television crime dramas"²⁷ and that "this larger 'effect' may also be a function of respondents' social location and particular life experiences."²⁸

In the Wayne County study, we sought to test that "tech effect" theory and its underlying assumption that jurors are representative of broader scientific and technological changes in our society. If that assumption is correct, it is important to understand whether there is a correlation between juror knowledge and use of modern technology, and increased expectations and demands that science and technology will be utilized in the criminal justice system. The Wayne County study data shows that modern technology is widely available to, and used by, jurors. This finding is reflective of national data for the general population.²⁹ Regression analysis in the Wayne County study of the usage of sophisticated technology devices showed a somewhat significant impact on jurors' expectations for scientific evidence in a variety of criminal justice situations. An analysis of juror exposure to justice-related television programs generally, as opposed to *CSI*-type forensic science programs in particular, showed a significant impact on jurors' expectations for scientific evidence. An analysis of juror interest in and exposure to crime and justice news and information from a wider variety of mass media sources did not reveal an impact of similar significance.

²⁷ Okita, *supra* note 12, at p. 75.

²⁸ *Id.*, Even more directly, Okita concludes by stating "I agree with their assertions, and further the argument by contending that forensic science, and by virtue of its content, that *CSI*, may have become emblematic of both the rapid rate of scientific and technological change our society is continually undergoing, and of a desire for a social certainty of justice that continues to wane." *Id.*, at p. 106

²⁹ See Section IV *infra*.

II. The Study Method

A. Participants

The survey was administered to all persons called for jury duty on Wednesdays between December 17, 2008 and February 7, 2009 in the Circuit Court for Wayne County, Michigan, located in downtown Detroit. In this busy jurisdiction, jurors are summoned to appear almost every day of the week for service in a variety of courts. The Wednesday jury call consists of approximately 200 jurors, and includes selection for service in criminal jury trials at the felony level. The jury summonses are issued based on a computerized random selection of individuals, in accordance with state law.³⁰

Wayne County is the most populous county in Michigan and includes the city of Detroit, as well as many surrounding suburban cities and townships. Its estimated population in 2007 was 1,985,101,³¹ of which approximately 44 percent reside in Detroit.³² The county population is 51.8 percent female, 41.3 percent African-American, and 54.4 percent Caucasian.³³ The median household income in 2007 was \$42,529.³⁴ Seventy-seven percent of the population over the age of 25 has completed high school, and 17.2 percent has earned a bachelor's degree.³⁵

³⁰ See MICH. COMP. LAWS §§ 600.1300-1376 (2006). The list includes all persons who have a driver's license or alternative State identification card. Persons less than 18 years old, convicted felons, and persons who have d on jury duty within the last 12 months are excluded. Persons over 70 years old are not automatically excluded but may remove themselves from the list upon request. Individual jurors may be excused for health or hardship reasons by a judge.

³¹ U.S. Census Bureau, State & County Quick Facts: Wayne County, Michigan, <http://quickfacts.census.gov/qfd/states/26/26163.html> (last visited April 20, 2009).

³² The estimated Detroit population in 2006 was 871,121. U.S. Census Bureau, 2007 State & County Quick Facts: Wayne County, Michigan, <http://quickfacts.census.gov/qfd/states/26/2622000.html> (last visited April 20, 2009).

³³ U.S. Census Bureau, State & County Quick Facts: Wayne County, Michigan, <http://quickfacts.census.gov/qfd/states/26/26163.html> (last visited April 20, 2009).

³⁴ *Id.*

³⁵ *Id.*

These educational levels are below the national averages -- 84 percent of the U.S. population consists of high school graduates, and 28 percent has earned a bachelor's degree.³⁶

The self-reported demographics of the jurors who participated in the Wayne County survey are shown in Table 1. For comparison purposes, the demographics of the previous Washtenaw County survey participants are shown as well.

Table 1: Descriptive Statistics of Demographic Variables of Surveyed Jurors

Variable	Wayne County Frequency	Wayne County Percent	Washtenaw County Percent
Age (Mean 48.57)			
Less than 30	150	12.3%	15.4%
30-39	205	16.8%	18.5%
40-49	295	24.2%	24.2%
50-59	330	27.1%	24.4%
60+	179	14.7%	13.4%
Unknown	60	4.9%	4.0%
Gender			
Female	680	55.8%	54.9%
Male	495	40.6%	43.4%
Unknown	44	3.6%	2.9%
Education			
Post-graduate degree	173	14.2%	32.0%
College graduate	316	25.9%	44.7%
Some college	411	33.7%	n/a
High school	235	19.2%	12.6%
Less than high school	27	2.2%	1.4%
Unknown	57	4.7%	2.9%
Household Income			
Over \$100,000	242	19.9%	28.8%
\$50,000 – \$100,000	440	36.1%	34.3%
\$30,000 - \$49,999	269	22.1%	19.6%
Less than \$30,000	188	15.4%	12.6%
Unknown	80	6.6%	4.8%

³⁶ U.S. Census Bureau, Educational Attainment in the United States: 2007 (January 2009), <http://www.census.gov/prod/2009pubs/p20-560.pdf> (last visited April 20, 2009).

Race/Ethnicity			
Caucasian	733	60.1%	82.2%
Hispanic	25	2.1%	0.9%
African American	296	24.3%	5.6%
Asian	28	2.3%	2.5%
Other	44	3.6%	3.6%
Unknown	93	7.6%	5.2%
Urbanicity³⁷			
City	454	37.2%	33.0%
Suburban	676	55.5%	38.5%
Rural	36	3.0%	26.3%
Unknown	53	4.3%	2.2%
Neighborhood Crime³⁸			
Very serious	84	6.9%	0.8%
Serious	133	10.9%	5.6%
Somewhat serious	449	36.8%	31.2%
Not serious at all	499	40.9%	61.0%
Unknown	54	4.4%	2.5%
Violent Victimization³⁹			
Yes	335	27.5%	19.1%
No	840	68.9%	79.4%
Unknown	44	3.6%	1.6%
Property Victimization⁴⁰			
Yes	696	57.1%	45.9%
No	480	39.4%	52.2%
Unknown	43	3.5%	1.9%
Political View			

³⁷ "Urbanicity" refers to how urban the particular area in Wayne County is where the individual juror lives.

³⁸ "Neighborhood Crime" refers to crime in the juror's own neighborhood.

³⁹ "Violent Victimization" refers refer to whether the individual juror was ever assaulted.

⁴⁰ "Property Victimization" refers to whether the individual juror was ever the victim of a property crime.

Very conservative	67	5.5%	4.5%
Conservative	265	21.7%	21.2%
Moderate	568	46.6%	41.7%
Liberal	207	17.0%	21.9%
Very liberal	44	3.6%	7.6%
Unknown	68	5.6%	3.1%
Total	1219	100%	

With some exceptions, the jury venire in the survey appears to be fairly representative of the Wayne County population. The percentage of African-American jurors is a notable exception, with only 21.3 percent of jurors being African-American compared to 41.3 percent in the general population of the county.⁴¹ The percentage of Caucasian jurors (60.1%) was slightly higher than the 54.4 percent in Wayne County's general population.⁴² The educational attainment level of the jurors appears somewhat higher than the general county population, with 93 percent of the surveyed jurors reporting that they at least graduated from high school compared to 77 percent of the general population in Wayne County.⁴³ The study sample also included a slightly higher female population (55.8%) than the county census showed (51.8%).⁴⁴ The mean age of the sample (48.57 years) was consistent with county census data.⁴⁵

⁴¹ U.S. Census Bureau, State & County Quick Facts: Wayne County, Michigan, *supra* note 20. This disparity between minorities in the population and minorities in the jury venire in Wayne County has been documented previously and the subject of a study by the National center for State Courts. Paula L. Hannaford-Agor and G. Thomas Munsterman, *Third Judicial Circuit of Michigan Jury System Assessment*, August, 2006, available online at http://www.ncsconline.org/D_Research/cjs/pdf/Michigan_3rd_Circuit.pdf (last visited August 26, 2009). Essentially, the study concluded that the summons source list and response system has flaws that operate to diminished minority response to summons for jury duty. See also Neil Vidmar & Valerie P. Hans, *AMERICAN JURIES* (2007) suggesting at p. 76 that such "[s]ystem-level bureaucratic problems and the potential jurors themselves create difficulties that lead to less than fully representative juries."

⁴² Id.

⁴³ Id.

⁴⁴ Id.

⁴⁵ Id.

With respect to their individual experience as crime victims, 68.9 percent of the Wayne County study sample indicated they had not been a victim of a violent crime in the last ten years, but 57.1 percent said they had been a victim of a property crime during that same period. Over half of the summoned jurors in the sample (54.6%) described the crime problem in their neighborhood as at least somewhat serious.

B. Survey Materials and Procedures

Most of the survey questions included in the survey administered in Wayne County⁴⁶ were the same survey questions that were used in the Washtenaw County study.⁴⁷ These questions gathered information about jurors' television-watching habits,⁴⁸ their expectations that they would see various types of scientific and other evidence in several crime scenarios,⁴⁹ their likely verdict in each of those crime scenarios depending on whether their expectations were met,⁵⁰ and a variety of demographic and victimization-related personal information. However, the Wayne County survey also asked jurors for information that was not requested as part of the Washtenaw County study. Using Likert-type scales, jurors were asked how interested they are in

⁴⁶ A copy of the survey is on file with the authors.

⁴⁷ For a detailed description of the survey questions, see Shelton, et al, *supra* note 4 at pp. 340-343.

⁴⁸ The television program list was revised to reflect current programming differences from the 2006 study.

⁴⁹ Seven questions posed scenarios of the following types of cases and charges: every criminal case; murder or attempted murder; physical assault of any kind; rape or other criminal sexual conduct; breaking and entering; any theft case; and any crime involving a gun. For each scenario, jurors were asked whether they expected any of the following seven types of evidence: eyewitness testimony from the alleged victim; eyewitness testimony from at least one other witness; circumstantial evidence; scientific evidence of some kind; DNA evidence; fingerprint evidence; and ballistics or other firearms laboratory evidence. The choices for each type of evidence were "yes, no, or unsure."

⁵⁰ Prior to this section, jurors were provided with the reasonable doubt and burden of proof jury instructions used in Michigan. They were then asked how likely they were to find a defendant guilty or not guilty based on certain types of evidence presented in the seven various types of cases. Responses were made on a five-value scale including "I would find the defendant guilty, I would probably find the defendant guilty, I am not sure what I would do, I would probably find the defendant not guilty, or I would find the defendant not guilty."

information about crimes and trials, and how often they obtain criminal justice information from sources ranging from broadcast and print media to movies, television, and Internet sources.

Jurors were asked what crime laboratory resources they thought were available to the local police and when they think those laboratory resources should be used, i.e. in every criminal case, in every felony case, or only in serious crimes such murder, rape or robbery. In the demographics section, we added questions to determine whether jurors had various technology devices available to them, including a computer at work or home, a cell phone with or without text messaging or Internet access, cable or satellite television at home, and a GPS or other electronic navigation device.

The survey was administered to all persons appearing for jury duty in on Wednesdays at the Frank Murphy Hall of Justice where felony trials are conducted in Detroit during a six week period. A judge advised the jurors that it was for academic research purposes only, that their responses would be anonymous and would not impact their potential selection as jurors in any case, and that participation was entirely voluntary. Of the 1,257 persons appearing for jury duty, 1,219 completed valid survey instruments.

III. The Effect of CSI Watching on Metropolitan Jurors

A. Expectations for Scientific Evidence are High

Jurors' expectations that the prosecution would present scientific evidence were high, and exceeded the level of expectations that the data demonstrated in the Washtenaw County study. In Wayne County, 58.3 percent of the respondent jurors expected to see scientific evidence of some kind in every type of criminal case.⁵¹ A significant number of jurors (42.1%) expect to see

⁵¹ This compared to 46.3% of Washtenaw County jurors in our 2006 study. Shelton, et al, *supra* note 4 at p. 349.

DNA in every case.⁵² More than half of Wayne County jurors expect to see fingerprint evidence (56.5%) and even ballistics evidence (49.1%) in every criminal case.

Expectations for scientific evidence varied according to the type of crime involved but still remained very high. In murder or attempted murder cases, jurors' expectations for scientific evidence were consistently high as to each of the various scientific evidence categories. Over four in five Wayne County jurors in a murder or attempted murder case expect to be presented with scientific evidence of some kind (83.3%), fingerprint evidence (84.5%), and ballistics evidence (83.9%). Almost three-fourths (74.6%) of the Wayne County jurors expect to see DNA evidence in murder cases.⁵³ In rape cases, the expectations for scientific evidence generally, and DNA evidence in particular, were very high, with 83 percent of the Wayne County jurors looking for some kind of scientific evidence. Almost all (88.9%) of the Wayne County jurors expect to see DNA evidence in a rape case, with only 3.1 percent saying they did not expect it and 4.8 percent being "unsure."⁵⁴ Even in cases involving less serious types of crimes, jurors' expectations for scientific evidence seem strong. In assault cases not involving murder, attempted murder, or rape, jurors' expectations were: scientific evidence of some kind – 55%; DNA – 48.6%; fingerprint – 54%; and ballistics – 44.6%. In breaking and entering cases, the expectations were: scientific evidence of some kind – 56.8%; DNA – 31.9%; fingerprint – 83.8%; and ballistics – 28.8%. In "any theft" case, the expectations were: scientific evidence of some kind – 45.4%; DNA – 24.2%; fingerprint – 83.8%; and ballistics – 28.8%. In general, the

⁵² This was almost double the number of Washtenaw County jurors who reported two years earlier that they expected to see DNA in every case. *Id.*

⁵³ Again, these responses were considerably higher than those we previously recorded in Washtenaw County, where for example the expectation for DNA in murder cases was 45.5%. *Id.*

⁵⁴ This compares to 72.6% of Washtenaw County jurors who expected to see DNA evidence in rape cases. *Id.*

expectation for fingerprint evidence was high for every type of crime that was asked about in the survey.

B. The Relationship of CSI Watching to High Expectations for Scientific Evidence

The data collected in the Washtenaw County study led to the conclusion that these high juror expectations for scientific evidence were unrelated to watching *CSI* or its ilk on television. The study of Wayne County jurors reinforced, and indeed strengthened, that conclusion.

A comparison of the impact that watching *CSI* has on the evidentiary expectations of Wayne County jurors to the impact on Washtenaw County jurors led to interesting results. The data generally showed that watching *CSI* made even less of a difference in the evidentiary expectations of Wayne County jurors than it did in the evidentiary expectations of Washtenaw County jurors. Thus, the metropolitan jurors seem to be less affected in this regard than are the suburban jurors. Using $p < .10$ as the measure of significance, watching *CSI* made a difference in the expectations for twenty-one of the forty-nine categories of evidence in the Washtenaw County study, compared to only thirteen of the forty-nine categories in the Wayne County study. For example, watching *CSI* made a significant difference in the expectations of Washtenaw County jurors for scientific evidence in murder and rape cases while there was no such difference noted in Wayne County jurors. On the other hand, *CSI* watchers in Wayne County were more likely than those in Washtenaw County to expect DNA and fingerprint evidence in assault and breaking and entering cases. Applying a lower p-level at $p < .05$ as a significant difference between *CSI* watchers and non-*CSI* watchers, the Washtenaw County sample showed a significant statistical difference in sixteen expectations (including four almost significant), while the Wayne County sample showed only nine (including one almost significant). A

complete comparison of the evidence expectation differences between the two groups is shown in Table 2.

Table 2: Comparison of evidence expectation differences between *CSI* Watchers and non-*CSI* Watchers in Washtenaw and Wayne Counties

	Washtenaw <i>p</i>	Wayne <i>p</i>
Every Criminal Case		
Victim's Testimony	.074*	.053*
Eyewitness Testimony	.410	.034**
Circumstantial Evidence	.000***	.222
Scientific Evidence of Any Kind	.145	.869
DNA	.275	.328
Fingerprint	.053*	.111
Ballistic Evidence	.055*	.132
Murder (or Attempt)		
Victim's Testimony	.398	.230
Eyewitness Testimony	.742	.068*
Circumstantial Evidence	.013**	.856
Scientific Evidence of Any Kind	.018**	.768
DNA	.285	.855
Fingerprint	.304	.152
Ballistic Evidence	.016**	.112
Physical Assault		
Victim's Testimony	.031**	.119
Eyewitness Testimony	.338	.427
Circumstantial Evidence	.872	.280
Scientific Evidence of Any Kind	.602	.692
DNA	.007**	.000***
Fingerprint	.283	.017**
Ballistic Evidence	.268	.034**
Rape (Sexual Assault)		
Victim's Testimony	.082*	.000***
Eyewitness Testimony	.776	.285
Circumstantial Evidence	.921	.514
Scientific Evidence of Any Kind	.072*	.256
DNA	.297	.433
Fingerprint	.432	.887
Ballistic Evidence	.087*	.443
Breaking and Entering		
Victim's Testimony	.670	.312
Eyewitness Testimony	.666	.444
Circumstantial Evidence	.031**	.768

Scientific Evidence of Any Kind	.052*	.297
DNA	.444	.006***
Fingerprint	.023**	.012**
Ballistic Evidence	.891	.063*
Any Theft Case		
Victim's Testimony	.177	.194
Eyewitness Testimony	.491	.256
Circumstantial Evidence	.017**	.867
Scientific Evidence of Any Kind	.548	.452
DNA	.521	.088*
Fingerprint	.051*	.074*
Ballistic Evidence	.951	.994
Crime Involving a Gun		
Victim's Testimony	.041**	.009***
Eyewitness Testimony	.277	.248
Circumstantial Evidence	.253	.830
Scientific Evidence of Any Kind	.041**	.756
DNA	.339	.506
Fingerprint	.060*	.702
Ballistic Evidence	.037**	.135

*p<.10, **p<.05, ***p<.01

C. Demands for Scientific Evidence as a Condition of Guilt

If the jurors followed the jury instruction they were given about the presumption of innocence and the burden of proof, the most rational, if not legally correct, response to questions about their probable verdict would be, "I am not sure what I would do," and almost half of the jurors generally gave that response. The other half, however, were willing to give their opinion as to their likely verdict with and without scientific evidence. The results were similar to those recorded in the Washtenaw County study, and in most cases the jurors still appear to repose considerable weight in the testimony of fact witnesses. In the "every criminal case" category, 28.7 percent would find the defendant guilty based on eyewitness testimony even without any scientific evidence, compared to 18.8 percent who said their probable verdict would be "not

guilty” in such a situation.⁵⁵ On the other hand, when the prosecution relies on circumstantial evidence, the failure to produce scientific evidence of some kind may be fatal to the government’s case, with 41 percent of jurors indicating a probable acquittal and only 9.2 percent indicating a probable guilty verdict.⁵⁶ The willingness to rely on factual witnesses did not extend to rape cases, where the jurors appeared to demand evidence as a condition of finding guilt. When the prosecution relies on the rape complainant or other witnesses but does not present scientific evidence of some kind, more jurors (27.1%) reported that they would find the defendant not guilty than guilty (21.1%). When the prosecutor does not present DNA evidence in a rape case, even more jurors surveyed indicated that they would be more likely to find the defendant not guilty, with 24.8 percent of the Wayne County jurors indicating a likely verdict of not guilty as opposed to 18.1 percent indicating a probable guilty verdict.

In other types of cases, a similar pattern of trusting factual witnesses but demanding scientific evidence in situations in which only circumstantial evidence was presented prevails. Even in murder cases when factual witnesses provide testimony but there is no scientific evidence, 36.8 percent of the jurors indicated a probable guilty verdict as opposed to 18.2 percent who indicated a probable not guilty verdict. In murder cases with factual witnesses, jurors are also less likely to demand DNA evidence, with 38.4 percent indicating a probable guilty verdict without DNA compared to 12.2 percent indicating a not guilty verdict. When the prosecution relies on circumstantial evidence in a murder case and fails to introduce scientific evidence,

⁵⁵ This compares to 21% and 16.2%, respectively, in the 2006 Washtenaw study. *Id.*, at p. 354.

⁵⁶ The Washtenaw results were very similar for circumstantial evidence cases, with guilty – not guilty verdict percentages at 40.4% and 6.5%, respectively. *Id.*

however, those ratios reversed and 36.1% of the jurors indicated a probable not guilty verdict as opposed to 12.2% indicating a probable guilty verdict.⁵⁷

D. The Relationship of CSI Watching to Juror Demands for Scientific Evidence as a Requisite for Conviction

The more pertinent issue regarding any so-called “CSI effect” is whether jurors who watch *CSI* are more likely to demand that the prosecutor present some scientific evidence before they will find a defendant guilty. The Washtenaw County study data showed significant differences between *CSI* watchers and non-*CSI* watchers in only four of thirteen scenarios, each depicting different crimes and evidence. The data therefore tended to disprove the existence of the “CSI effect” as portrayed by prosecutorial anecdotes. The results in the urban Wayne County study were even more pronounced. In the same thirteen scenarios, there were no significant differences in the propensity or reluctance of Wayne County jurors to find a defendant guilty based on whether they watch *CSI*-type programs. Table 3 shows the findings in Wayne County and compares them to the prior Washtenaw County results.

Table 3: Comparison of the likelihood of conviction without scientific evidence between *CSI* Watchers and non-*CSI* Watchers in Washtenaw and Wayne Counties

	Washtenaw <i>p</i>	Wayne <i>p</i>
Every Criminal Case		
Witness testimony without scientific evidence	.058*	.957
Circumstantial Evidence without scientific evidence	.303	.896
Murder (or Attempt)		
Witness testimony without scientific evidence	.581	.143
Circumstantial Evidence without scientific evidence	.279	.223
Testimony without DNA	.415	.261

⁵⁷ Again, the Washtenaw County jurors followed a similar pattern of probable verdicts in murder cases. *Id*

Physical Assault		
Witness testimony without scientific evidence	.240	.189
Circumstantial Evidence without scientific evidence	.135	.289
Rape (Sexual Assault)		
Witness testimony without scientific evidence	.155	.842
Witness testimony without DNA	.048**	.249
Breaking and Entering		
Witness testimony without fingerprint evidence	.078*	.701
Any Theft Case		
Witness testimony without fingerprint evidence	.054*	.829
Crime Involving a Gun		
Witness testimony without ballistics evidence	.349	.458

*p<.10, **p<.05, ***p<.01

IV. Exploring the “Tech Effect”

One explanation for the increased expectations and demands for scientific evidence by jurors is the possibility of a broad “tech effect,”⁵⁸ rather than the narrow attribution to a particular television show, or even a genre of such programs. The “tech effect” suggests that jurors’ increased expectations and demands are more likely the result of broader cultural influences related to modern technological advances. The “tech effect” further suggests that “the origins of those expectations lie in the broader permeation of the changes in our popular culture brought about by the confluence of rapid advances in science and information technology and the increased use of crime stories as a vehicle to dramatize those advances.”⁵⁹

After publication of the 2006 Washtenaw County study, Simon Cole described the article’s suggested “tech effect” as an interpretation of the “CSI effect” that asserts that “the

⁵⁸ See Section I *infra*.

⁵⁹ Shelton, et al, *supra* note 4, at 362-365 (2006).

cause of changes in juror behavior is not *CSI* but rather the real-life technological improvements in forensic science.”⁶⁰ Cole’s description is an accurate but incomplete one. In addition to the actual forensic science improvements that have occurred, jurors’ perceptions of those increased forensic evidence capabilities, whether they exist in reality or not, also influence jurors’ behavior. Further, even if the forensic science techniques that the jurors envision actually exist, the local police or prosecutors do not always have access to those techniques for budgetary, policy, or other reasons. It is the perceptions of jurors about scientific evidence, as reflected in their expectations and demands in a criminal trial, that represent the real “tech effect” with which the criminal justice system must come to grips. An important part of that coping process needs to be a realization that the perceptions do not arise from a single television show or even a genre of television shows, but rather from far-reaching changes in our popular culture relating to science and technology.

The “tech effect,” as Professor Cole accurately concludes, is “*not* a societal problem.”⁶¹ It is a not problem in the sense of anything inappropriate or “wrongful,” as prosecutors and the media like to portray the “*CSI* effect.” In other words, the “*CSI* effect” should not be fodder for the “faulty criminal justice system frame,” one of the five crime-and-justice frames that Theodore Sassen describes that competes in the United States for both the public’s and the media’s attention.⁶²

All five of these frames, including the other four -- “blocked opportunity frame,” “social breakdown frame,” “racist system frame,” and “violent media frame” -- offer explanations of

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⁶⁰Simon A. Cole and R. Dioso-Villa, Investigating the “*CSI* Effect” Effect: Media and Litigation Crisis in Criminal Law, *supra* note 7, at p. 1347 (discussing the “tech effect” proposed in the Washtenaw County study).

⁶¹ *Id* at p. 1348.

⁶² Theodore Sassen, *Crime Talk*, Hawthorne, NY: Aldine de Gruyter (1995)

crime, point to specific causes, and come with accompanying policy-oriented solutions⁶³. The “faulty system frame” argues that crime stems from criminal justice leniency and inefficiency that inadequate DNA laboratories personify today. The policy solutions have called for the criminal justice system to “get tough” and to emphasize the administration of “crime control” rather than the administration of “due process.”⁶⁴ As Ray Surette has elaborated, the faulty criminal justice system frame:

holds that crime results from a lack of “law and order.” People commit crimes because they know that they can get away with them because the police are handcuffed by liberal judges. The prisons are revolving doors. The only way to ensure public safety is to increase the swiftness, certainty, and severity of punishment. Loopholes and technicalities that impede the apprehension and imprisonment of offenders must be eliminated, and funding for police, courts, and prisons must be increased. The faulty system frame is symbolically represented by the image of inmates passing through a revolving door of a prison.⁶⁵

Hence, the rising expectations for scientific evidence are not necessarily due to either an alleged negative (or “strong prosecutor”) “*CSI* effect,” or a faulty criminal justice system exacerbated by unrealistic juror expectations or behavior. On the contrary, rising expectations are grounded in a mediated “tech effect” which has become part and parcel of our criminal justice culture. The only problem stemming from this higher reality of technology is how the criminal justice system will adapt to this new reality.

A. Juror Familiarity with Technology and Criminal Justice

Part of the basis for suggesting a “tech effect” is the idea that jurors have become very technologically sophisticated. They use computers and consumer-level technological gadgets on

⁶³ Id.

⁶⁴ Ray Surette. *Media, Crime, and Criminal Justice: Images, Realities, and Policies*, 3rd edition. Belmont, CA: Thomson-Wadsworth (2007).

⁶⁵ Id at p. 39.

a daily basis, and therefore have an appreciation of the power of modern information technology. From this appreciation, jurors develop an expectation that the criminal justice system will exercise that power as well.⁶⁶

We expected jurors to have the same level of technology awareness that has been documented in the general population. To that end, the survey of Wayne County jurors included questions designed to determine the level of metropolitan jurors' usage of computers and other technological equipment. Jurors were asked whether they (1) used a computer at work or at home; (2) had cellular telephones, and if so, the capabilities of those telephones; (3) had cable or satellite television access; and (4) had a GPS navigational device. The results are shown in Table 4.

Table 4: Technology Frequencies

Variable	Frequency	Percent
Computer at Work		
Yes	839	68.8%
No	260	21.3%
Missing	120	9.8%
Computer at Home		
Yes	1057	86.7%
No	107	8.8%
Missing	55	4.5%
Cell Phone		
Yes	1124	92.2%
No	50	4.1%
Missing	45	3.7%
Cell Phone with email/texting		
Yes	865	71%
No	283	23.2%
Missing	71	5.8%

⁶⁶ See Donald E. Shelton, *Twenty-First Century Forensic Science Challenges for Trial Judges in Criminal Cases: Where the "PolyButadiene" Meets the "Bitumen"*, 18 *Widener L. J.* 309 (2009) at 376-377; Shelton, et al, *supra* note 4, at 362-365; and Sarah Keturah Deutsch & Gray Cavender, *CSI and Forensic Realism*, 15 *J. Crim Just. & Popular Culture* 34 (2008).

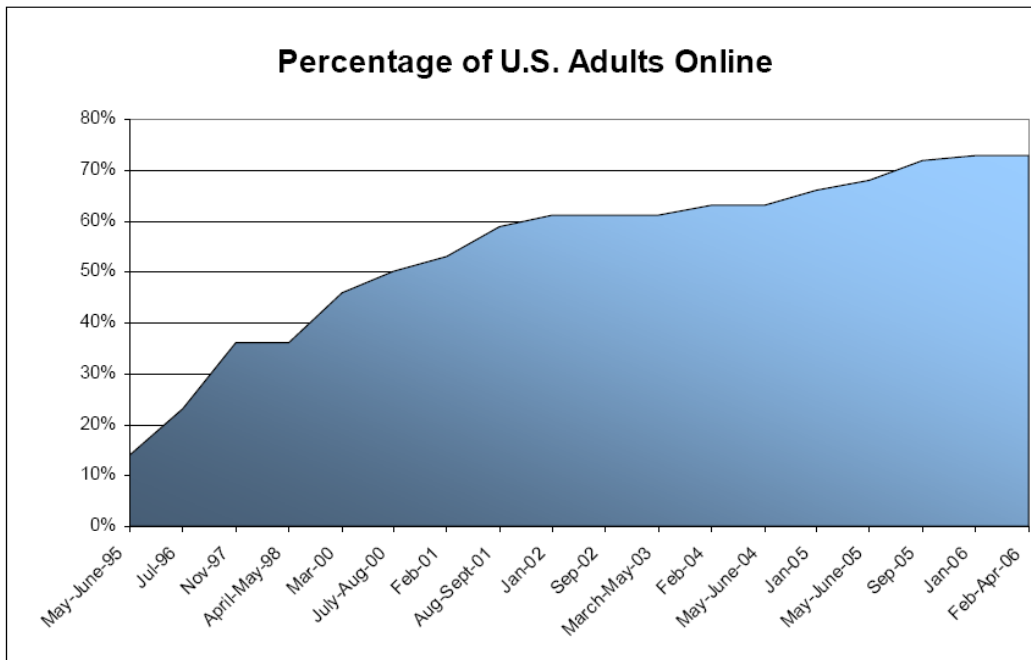
Cell Phone with Internet		
Yes	610	41.8%
No	621	50.9%
Missing	88	7.2%
Cable or Satellite Television		
Yes	1045	85.7%
No	117	9.6%
Missing	57	4.7%
GPS/Navigation System		
Yes	439	36%
No	689	56.5%
Missing	91	7.5%

The data collected from the Wayne County jurors is clearly reflective of survey data from the general population regarding access and usage of the Internet. Such usage may actually exceed some of the data about this issue obtained only a few years ago. For example, the 2006 Pew Internet Research Project revealed a continually expanding penetration of the Internet into the lives of adult Americans.⁶⁷ The Pew study data collected in early 2006 showed that 73 percent of American adults are Internet users, reflecting an increase from 66 percent in a Pew study just one year earlier.⁶⁸ Almost 87 percent of the surveyed Wayne County jurors reported having a computer in their home, and over 40 percent even have Internet access through their cell phones. Given the increased rate of Internet usage documented in the Pew research, the 87 percent reflected in the Wayne County study data may simply be a continuation of the strong trends shown over the last several years.⁶⁹

⁶⁷ Madden, Mary, *Internet Penetration and Impact*, Pew Internet & American Life Project, April 26, 2006, available at <http://www.pewInternet.org/Reports/2006/Internet-Penetration-and-Impact.aspx> (last accessed April 26, 2009).

⁶⁸ *Id.*

⁶⁹ *Id.*, at p. 3.



The surveyed jurors also reported using modern information appliances other than home or office computers. Wayne County jurors also reported cellular telephone usage that is consistent with the increasing permeation of cellular telephone usage that has occurred in our culture. Over 92 percent of the surveyed jurors have cell phones, compared to the 73 percent nationally that the Pew Internet Project documented in 2006.⁷⁰ The Pew research also recently reported that 49 percent of adult Americans consider their cell phones to be a “necessity” rather than a “luxury.”⁷¹

⁷⁰ Horrigan, John B., *A Typology of Information and Communication Technology Users*, Pew Internet & American Life Project, May 7, 2007, p. 2, available at http://www.pewInternet.org/PPF/r/213/report_display.asp (last accessed April 26, 2009).

⁷¹ Morin, Rich, and Paul Taylor, *Luxury or Necessity? The Public Makes a U-Turn*, Pew Research Center, April 23, 2009, available at <http://pewresearch.org/pubs/1199/more-items-seen-as-luxury-not-necessity> (last accessed April 26, 2009)

The Wayne County jurors are part of a picture of our culture that is dramatically changed by technology and its associated gadgets. As the Pew Internet Project described it, people have an evolving relationship to cyberspace and all of its information:⁷²

. . . at a time when accessing online content no longer necessarily means walking over to a weighty beige box and taking a seat. Lighter laptop computers and high-speed networks (wireless and otherwise) give people the opportunity to get digital content on the go and do new things with computing – such as making a phone call. More versatile “smart devices” make emailing, phone calling, and downloading digital content possible with a very portable device. Pictures – photographs and videos – can be created and shared almost instantly, and Web cameras can put people in touch face-to-face over distance in real-time using broadband connections.

While jurors seem to be personally technologically sophisticated, do jurors expect that their local police have, and will use, high technology equipment? The Wayne County study survey asked jurors whether they thought the police in Southeast Michigan have certain crime laboratory testing available to them, including fingerprint comparison, ballistics analysis, hair or fiber analysis, and DNA analysis. They were also asked in what types of cases (every criminal case, every felony case, or only serious crimes like murder, rape, or robbery) they expected the local police to use those analytical technologies. Overwhelmingly, the Wayne County jurors believe that their local police have the technology available to perform fingerprint, ballistics, hair or fiber, and DNA analysis. For the most part, they expect the police to use that technology in every criminal case. Almost half (45.3 percent) of the jurors believe the police should use DNA analysis in every case. The results are shown in Table 5.

Table 5: Police Technology Expectations – Number (Percent)

Police Technology	Local Availability			
	Yes	No	Unsure	Missing

⁷² Horrigan, John B., *A Typology of Information and Communication Technology Users*, *supra*, note 37.

Fingerprint analysis	1044 (85.6)	26 (2.1)	127 (10.4)	22 (1.8)	
Ballistics analysis	984 (80.7)	37 (3.0)	172 (14.1)	26 (2.1)	
Hair and Fiber analysis	843 (69.2)	73 (6.0)	274 (22.5)	29 (2.4)	
DNA analysis	861 (70.6)	79 (6.5)	250 (20.5)	29 (2.4)	
Cases in Which Technology Should Be Used Locally					
	Every case	Every Felony	Serious Cases Only	Unsure	Missing
Fingerprint analysis	778 (63.8)	212 (17.4)	109 (8.9)	80 (6.6)	40 (3.3)
Ballistics analysis	603 (49.5)	248 (20.3)	239 (19.6)	89 (7.3)	40 (3.3)
Hair and Fiber analysis	543 (44.5)	189 (15.5)	342 (28.1)	106 (8.7)	39 (3.2)
DNA analysis	552 (45.3)	188 (15.4)	353 (29.0)	90 (7.4)	36 (3.0)

The popularity of crime-related media also suggests that jurors are attracted to criminal justice issues. The Wayne County jurors indicated that they have a fairly high interest in getting news about crime and criminal trials. Almost 70 percent said they were either “very” or “somewhat” interested in getting news about crime and criminal trials. The jurors were asked what sources they use, including radio, newspapers, television, Internet, movies, magazines, and books, to get news about crime and criminal trials and how often they use each source. The results are shown in Table 6.

Table 6: Sources for News About Crime and Criminal Trials – Number (percent)

Source	Regularly	Often	On occasion	Almost never	Never	Missing
Radio	271 (22.2)	267 (21.9)	335 (30.0)	161 (13.2)	100 (8.2)	54 (4.4)
Newspapers	260 (21.3)	274 (22.5)	335 (27.5)	179 (14.7)	119 (9.8)	52 (4.3)
Television	490 (40.2)	349 (28.6)	251 (20.6)	55 (4.5)	29 (2.4)	45 (3.7)
Internet	187 (15.3)	228 (18.7)	310 (25.4)	183 (15.0)	229 (18.7)	83 (6.8)

Movies	64 (5.3)	114 (9.4)	356 (29.2)	316 (25.9)	291 (23.9)	78 (6.4)
Magazines	34 (2.8)	83 (6.8)	333 (27.3)	357 (29.3)	334 (27.4)	78 (6.4)
Books	30 (2.5)	33 (2.7)	162 (13.3)	235 (19.3)	686 (56.3)	73 (6.0)

The study data showed that print media is not the primary source for news about crime. Television is the clearly dominant medium for criminal justice information in popular culture, with 68.8 percent of jurors indicating that they use television to get such information at least regularly, if not often. Adding jurors who said they use television at least on occasion for criminal justice information increases the cumulative percentage to 89.4 percent. Nearly half of the jurors in the Wayne County study reported using newspapers at least "often" but 34 percent of the jurors use the Internet at least "often" to get criminal justice information.

Although the jurors primarily rely on television for criminal justice information, that medium itself has undergone significant recent changes. Access to the multitude of video sources through cable television has dramatically changed the availability and type of information, including information about the criminal justice system, in our popular culture. For example, in 2008, more people reported that they obtained their national news from cable television programs than from traditional television broadcast network news programs, although people continued to rely on local broadcast stations for local news.⁷³ Nationally, 89.1 percent of American households have cable or satellite television access, while only 10.9 percent have broadcast only.⁷⁴ As indicated in Table 6, Wayne County jurors reported information that is

⁷³ Pew Research Center Biennial News Consumption Survey, *Watching, Reading and Listening to the News*, August 17, 2008, available at <http://people-press.org/reports/pdf/444.pdf> (last accessed April 26, 2009)

⁷⁴ McDonough, Pat, *Household TV Trends Holding Steady: Nielsen's Economic Study 2008*, February 24, 2009, available at http://blog.nielsen.com/nielsenwire/media_entertainment/household-tv-trends-holding-steady-nielsen%e2%80%99s-economic-study-2008/ (last accessed April 26, 2009).

consistent with this trend, with over 85 percent indicating that they access television through cable or satellite.

Social scientists have long understood that characterizations of our criminal justice system in television and other media influence jurors' perceptions of that system. An early theory for this influence is the cultivation theory, which George Gerbner posited over thirty years ago.⁷⁵ He theorized that television programs develop or "cultivate" the public's perceptions of societal reality.⁷⁶ Indeed, he regarded television as such a strong force in our society that he believed it was the source of our perceptions of reality.⁷⁷ Gerbner found that one strong message that television communicated to the public was about crime and an overestimated likelihood of becoming a victim of crime in a "mean world."⁷⁸

Gerbner's view of mediated images of crime and justice has been expanded and developed over the past thirty years.⁷⁹ The modern issue with the originally framed cultivation theory as a means of explaining the impact of popular culture on individual perceptions of reality is that it is technologically outdated. Although it still may be the most important source of criminal justice information, television no longer has the overwhelming media impact on our culture today that it did when Gerbner made his observations. Thirty years has turned out to be

⁷⁵ George Gerbner et al., *Growing Up With Television: Cultivation Processes*, in MEDIA EFFECTS: ADVANCES IN THEORY AND RESEARCH 43, 43-44 (Jennings Bryant & Dolf Zillmann eds., 2d ed. 2002); George Gerbner & Larry Gross, *Living with Television: The Violence Profile*, 26 J. COMM. 173, 191 (1976).

⁷⁶ Gerbner & Gross, *supra* note 42, at 191.

⁷⁷ *Id.*

⁷⁸ *Id.* at p. 193.

⁷⁹ See K. Miller, COMMUNICATIONS THEORIES: PERSPECTIVES, PROCESSES, AND CONTEXTS, (2005).

an enormous amount of time technologically, as there are many more types of media sources now than there were then.

The television medium itself has changed dramatically. In her look at the “*CSI effect*,”

Kimberlianne Podlas noted how much the television world has changed:

Researchers, however, have noted that our contemporary television environment differs significantly from that which inspired cultivation theory. In general, when Gerbner began collecting data, in general, viewers could watch only three network affiliates, and, in larger markets, a few independent stations. Therefore, a heavy viewer of television watched a homogenous, finite universe of options. This led Gerbner to argue that the themes and conventions of storytelling cut across all programming. Since that time, television offerings have increased manifold. A heavy viewer can watch both a highly varied and highly specialized array of options. Consequently, many researchers assert that measuring the raw totality of TV viewing is no longer accurate.⁸⁰

Such assertions, however, should not be read to suggest that Gerbner's conception of the impact of mass media, and television in particular, on perceptions of the criminal justice system are no longer valid. These assertions should only be interpreted to mean that the range of sources of mass media in general, and the range of television sources in particular, is much broader and diverse than when Gerbner formulated the cultivation theory.

It certainly remains true that portrayals of crime and criminal justice on television impact the perception of law and, in particular, criminal justice in our popular culture.⁸¹ Today, however, the medium of television is one of many more conveyance mechanisms for the messages about crime and criminal justice we receive from the media. Television, while still a

⁸⁰ Kimberlianne Podlas, “*The CSI Effect*”: *Exposing the Media Myth*, supra note 12, at p.448 (footnote omitted).

⁸¹ See Steven D. Stark, *Perry Mason Meets Sonny Crockett: The History of Lawyers and the Police as Television Heroes*, 42 U. Miami L. Rev. 229, 229-35 (1988); Steven Keslowitz, Note, *The Simpsons, 24, and the Law: How Homer Simpson and Jack Bauer Influence Congressional Lawmaking and Judicial Reasoning*, 29 Cardozo L. Rev. 2787, 2787-98 (2007).

dominant media source, is no longer the monopolizing or overpowering media influence in our society that it once was.⁸²

While Podlas' observations about the increased diversity of media are undoubtedly correct, it does not follow that the messages about crime and criminal justice that the expanded media convey have changed. The diversity of sources does not necessarily mean that there is a concomitant diversity of themes about criminal justice that those media sources portray. The message that Gerbner saw in the media about crime and the "mean world" is still conveyed, but perhaps now by a much broader and diverse array of media sources, including a more diverse television medium itself. Cultivation theory is still valid, but this theory now applies to a greater diversity or multiplicity of media, including television. But more importantly to the issue of demands for forensic evidence, the same limited five frames still appear to constitute the themes or messages found in each of all of the media.⁸³

B. Correlating the "Tech Effect" to Juror Expectations for Scientific Evidence

To examine the "tech effect," the Wayne County study assumes that modern technological advances would be reflected in personal familiarity with the use of technology and in various popular media, including television, radio, newspaper, or the Internet. The study also assumes

⁸² See John Dimmick Yan Chen, & Zhan Li, *Competition Between the Internet and Traditional News Media: The Gratification-Opportunities Niche Dimension*, 17 J. MEDIA ECON. 19, 27 (2004) ("[T]he Internet has a competitive displacement effect on traditional media in the daily news domain with the largest displacements occurring for television and newspapers."); Press Release, The Pew Research Ctr., *Social Networking and Online Videos Take Off: Internet's Broader Role in Campaign 2008* (Jan. 11, 2008), available at <http://people-press.org/reports/pdf/384.pdf> (indicating that the number of people who get political information from the Internet, as opposed to television, almost doubled between 2004 and 2008).

⁸³ See Section IV *infra*.

that those who use technology regularly or who are exposed to those popular media frequently would become more aware of the technological and scientific development in forensics.

The survey first measured the level of juror exposure to various types of justice-related TV programs including news, dramas, and documentaries. Juror television-watching patterns on nineteen programs were measured on a five-point scale.⁸⁴ Each juror's set of responses was added to construct an index of the juror's overall exposure to justice-related television programs. With 19 programs and a watching pattern range of 1 to 5 for each program, the index of jurors' overall exposure to various justice-related television programs ranges from 19 to 95.

The second measure was the level of jurors' exposure to various media sources in collecting information about crime and criminal trials. Jurors were asked how often they obtain news or information about crime and criminal trials from radio, newspaper, television, Internet, movies, magazines, and true crime books or crime novels. Jurors' exposure to various media sources was measured on a five point scale.⁸⁵ With seven media sources and an exposure range of 1 to 5 for each media source, the overall results for each juror range from 7 to 35.

The third measure related to the use of technology devices. As stated earlier, the use of technology devices generally was so high across all of the jurors that regression using the full range of devices would not be meaningful. There was a significant break point between jurors who had cell phones with an Internet access feature and those who did not. For comparison purposes, that variable was therefore used to distinguish the most active users of technology devices.

⁸⁴ How often do you watch these television programs?: 5=regularly, 4=often, 3=on occasion, 2=almost never, and 1=never.

⁸⁵ 5=regularly, 4=often, 3=on occasion, 2=almost never, and 1=never.

Of course, the Wayne County study also measured juror exposure to *CSI* and other related television programs separately, with the same scale used in the first measure to compare potential differences between the “*CSI* effect” and the “tech effect.” The present study assumes that higher scores in these indexes would indicate more exposure to technological development in society in general and in forensics specifically. The first three measures were used to examine the “tech effect,” and the fourth was used for the examination and comparison of the “*CSI* effect.” In order to examine the “tech effect” above and beyond jurors' individual characteristics, the multivariate regression analysis included jurors' individual characteristics as control variables. Control variables included age, gender, race, educational level, household income, location of residence, neighborhood crime problems, victimization experience, and political views.

Juror expectations for seven types of evidence in cases involving seven different offenses were used as dependent variables. The seven types of evidence included eyewitness testimony from the alleged victim, eyewitness testimony from at least one other witness, circumstantial evidence, scientific evidence of some kind, DNA evidence, finger print evidence, and ballistics or other firearms laboratory evidence. The seven offenses included every criminal case, murder or attempted murder, physical assault of any kind, rape or other criminal sexual conduct, breaking and entering, theft, and crime involving gun. As a result, each of forty-nine expectations was used as a dependent variable. Each expectation about evidence was measured on a three point scale and coded as 1=yes, 0=not sure, and -1=no.

We conducted three sets of forty-nine multivariate regression analyses. In the first set of analyses, jurors' expectations on each of forty-nine conditions were regressed on jurors' exposure to various justice-related TV programs and control variables. In the second set,

independent variables included exposure to various media sources and control variables. In the third set, the independent variable was juror possession of a cell phone with an Internet feature. In order to compare differences between the “*CSI* effect” and “tech effect,” we then conducted an additional set of forty-nine multivariate regression analyses, with exposure to the *CSI*-dramas and control variables as independent variables.

The findings of the multivariate regression analyses are shown in Table 7. For convenience purposes, the table shows only the types of evidence in each offense case with which exposure to *CSI* dramas, exposure to various justice-related television programs, exposure to various media sources, and cell phone or Internet usage, respectively, has a significant relationship at least at the $p < .05$ level.

Table 7. Types of evidence expected by jurors (multivariate regression analysis)

	<i>CSI</i>	All-TV	Various sources	Cell/Internet
Every Criminal case	Victim	Victim	Victim	Sci. evidence
		Circumstantial	Fingerprint	DNA
		Sci. evidence	DNA	Fingerprint
		DNA	Ballistics	Ballistics
		Fingerprint		
		Ballistics		
Murder /attempt	Victim	Eyewitness	Fingerprint	DNA
	Eyewitness	Fingerprint		Fingerprint
		Ballistics		Ballistics
Physical assault	DNA	DNA		Eyewitness
	Fingerprint	Fingerprint		DNA
		Ballistics		Ballistics
Rape	Victim	Victim		Eyewitness
		Sci. evidence		Sci. evidence
		DNA		
		Fingerprint		
		Ballistics		

Breaking/Entering	DNA	Victim	Victim	Victim
	Fingerprint	Eyewitness	Ballistics	Eyewitness
		Sci. evidence		Circumstantial
		DNA		DNA
		Fingerprint		
		Ballistics		
Theft	DNA	Victim		Eyewitness
		Sci. evidence		DNA
		DNA		Ballistics
		Fingerprint		
		Ballistics		
Gun crime	Victim	Victim	Victim	Victim
		Eyewitness		
		DNA		
		Ballistics		

The jurors' exposure to various justice-related television programs showed significant relationships with their expectations in thirty-two of forty-nine scenarios. In "every criminal case," for example, jurors who frequently watch various justice-related television programs are significantly more likely to expect to see testimony from the victim, circumstantial evidence, some kind of scientific evidence, DNA, fingerprint, and ballistic evidence than jurors who watch less frequently. In general, exposure to various justice-related television programs was significantly related to the expectations in many evidence and offense scenarios.

On the other hand, juror exposure to a variety of media sources produced somewhat different findings. It showed significant relationships with expectations in only eight of forty-nine scenarios. In the "every criminal case" category, exposure to various media sources for information about recent crimes was significantly related to the expectations for testimony from victim, fingerprint, DNA, and ballistic evidence. Also, media exposure showed significant relationships with the expectations for fingerprint evidence in a murder case, with victim

testimony and ballistics evidence in a breaking and entering case, and with victim testimony in a crime involving a gun. Interestingly, however, media exposure showed no significance relationships with expectations for any evidence in the cases of physical assault, rape, or theft.

Juror access to and familiarity with technology devices, as reflected in the usage of cell phones with Internet features, produced findings between the other two "tech effect" measures. This highest level of technology usage had a significant relationship to evidentiary expectations in nineteen of the forty-nine scenarios. The jurors with cell phone Internet access had significant expectations that they would see some form of scientific evidence in six of the seven crime categories.

Jurors' exposure to *CSI* or similar dramas showed a significant relationship with their expectation in ten out of forty-nine scenarios. But as the Washtenaw County study showed in 2006, jurors who watch *CSI*-type dramas more frequently are more likely to expect traditional forms of evidence, such as victim testimony or eyewitness testimony, rather than just strictly scientific evidence, such as fingerprints, ballistics, or DNA. They expect victim testimony in every criminal case, every rape case, and every gun case, and victim testimony and eyewitness testimony in murder or attempted murder cases. They also expect DNA and fingerprint evidence in physical assault and theft cases.

V. "Mass Mediated Effects" on Attitudes, Behavior, and Expectations

Most contemporary scholars of mass media accept the reality that both factual and fictional narratives help to shape the beliefs, values, thoughts, and actions of the general public.⁸⁶

⁸⁶ Doris Graber, *Mass Media and American Politics*, 7th ed. Washington, D.C.: Congressional Quarterly Press (2005).

In fact, the dominant perspective within contemporary studies of crime, justice, and mass media is that of social constructionism, or the belief that reality is not only composed of objective and empirically based knowledge but also of information that we acquire from social interactions of all kinds. Social constructionism has also adopted the commingling or blurring of factual and fictional accounts as fundamental in shaping what the public comes to regard as crime and justice.⁸⁷ When it comes to the mass media's effects on the public's notions of social reality, there are four models that explain these effects: (1) the hypodermic needle model⁸⁸; (2) the limited effects model⁸⁹; (3) the minimal effects model; and (4) the indirect-effects model.⁹⁰

The hypodermic needle model, as the term suggests, assumes that the mass media has a direct and significant effect on the way people perceive social reality.⁹¹ Citizens are assumed to be autonomous or independent consumers of media-generated stories, which they rely on or seek answers from to develop acceptable beliefs and opinions about society.⁹² When it comes to the administration of justice in general, or to the trial and adjudication of criminal defendants in particular, this is the most superficial model of the four. Even if it could apply to some aspects of people's views on crime and justice, it has no application in determining the outcome of a criminal verdict.

⁸⁷ Gregg Barak (ed). *Media, Process, and the Social Construction of Crime: Studies in Newsmaking Criminology*. New York: Garland (1994); Victor Kappeler, Michael Blumberg and Gary Potter (eds.) *The Mythology of Crime and Justice*. Prospect Heights, IL: Waveland Press (1996); Surette, *supra* note 63.

⁸⁸ Roy E. Lotz, *Crime and the American Press*. Westport, CN: Praeger (1991).

⁸⁹ Shanto Iyengar and Donald Kinder, *News that Matters*. Chicago: Chicago University Press (1987).

⁹⁰ Id.

⁹¹ Lotz, *supra* note 87.

⁹² Id.

At the other end of a “media-effects” continuum is the limited effects model, which argues that while individuals turn to mass media for information, they do so not as a *tabula rasa* but as people who have experience and knowledge from other sources such as family, school, friends, and so on.⁹³ Moreover, people use their accumulated experiences and knowledge to evaluate what they read, see, or hear from the mass media.⁹⁴ Thus, individuals have prior, long standing beliefs and perceptions that make them susceptible or not to mass mediated content, factual or fictional.⁹⁵ As Ray Surette maintains, people possess a social reality that consists of both their “experienced reality” and their shared “symbolic reality.”⁹⁶ To think, for example, that all viewers of *CSI*-type programs would take away the same “lessons” is an absurd or untenable proposition to most media theorists.

Somewhere in the middle of the continuum is the minimal effects model, which argues that media effects are neither direct or total nor insignificant or inconsequential.⁹⁷ From this perspective, media effects are more general in the sense that they help to establish “agendas” in that they tell us what we should be thinking about or what the important issues of the day are.⁹⁸ Media effects also help us to “frame” discussions either thematically, using data, trends, and context, episodically, using anecdotal, individual, and superficial stories, or both.⁹⁹

⁹³ Iyengar and Kinder, *supra* note 88

⁹⁴ *Id.*

⁹⁵ *Id.*

⁹⁶ Surette, *supra* note 63 at 33-34.

⁹⁷ Iyengar and Kinder, *supra* note 88.

⁹⁸ Simon Cottle, *Mediatizing the Global War on Terror: Television’s Public Eye*, in A. P. Kavoori and T. Fraley (eds), *Media, Terrorism, and Theory: a Reader*, pp. 19-48. Lanham, MD: Rowman and Littlefield (2006).

⁹⁹ *Id.*

The fourth perspective, or the indirect effects model, rejects the hypodermic needle model. While the indirect effects model could be located on the continuum between the limited and minimal effects models, it also shares some things in common with each of these models. As Professor Barak has argued elsewhere, whether one is studying the interactions between law and order, crime and justice, or violence and nonviolence, one should simultaneously study the social construction of these phenomena as they are mediated through mass communications and popular culture.¹⁰⁰ For example, understanding the construction of newsmaking criminology requires an examination of the conscious and unconscious processes involved in the mass dissemination of symbolic consumer goods. To explain juror responses to forensic evidence issues in criminal cases, we suggest such an indirect effects model of mediated adjudication and turn to that model in the concluding section of this article.

Conclusion: Expectations and an Indirect Effects Model of Mediated Adjudication

The 2006 Washtenaw County study and the new Wayne County study clearly demonstrate that jurors very much expect the introduction of scientific evidence in criminal trials. These high expectations result in large part from what we have described as the "tech effect" of public awareness of, and use of, the powers of modern technology, coupled with public awareness of the availability of that technology as an important part of the criminal adjudication process. That public awareness comes from a variety of sources and especially from mass media, including television with its many expanded outlets. *CSI*-type programs are a part of that

¹⁰⁰ Gregg Barak. 1988. "Newsmaking Criminology: Reflections on Media, Intellectuals, and Crime." *Justice Quarterly* 5(4): 565-587; Barak, *Media, Process, and the Social Construction of Crime: Studies in Newsmaking Criminology*, *supra* note 87; Gregg Barak. 2003. *Violence and Nonviolence: Pathways to Understanding*. Thousand Oaks, CA: Sage Publications; Gregg Barak, 2007. "Mediatizing Law and Order: Applying Cottle's Architecture of Communicative Frames to the Social Construction of Crime and Justice." *Crime, Media, and Justice*:3 (1) April: 101-110

media milieu, but clearly do not play the significant role in forging jurors' expectations that many attribute to them.

Expectations are one thing, but demands are another. The Wayne County study data also demonstrates that even these expectations, that do not originate in watching CSI-type programs, still do not necessarily result in corresponding jury verdicts. At the very least, there is no factual basis for the "strong prosecutor" version of the "CSI effect," which claims that watching *CSI* programs causes jurors to wrongfully acquit defendants. That "CSI effect" is a myth. But the "tech effect," even as conveyed in the mass media far beyond the *CSI* genre, also cannot be singled out as the causative link to jury verdicts, either for convictions or acquittals. The process by which jurors eventually deliberate and adjudicate criminal allegations is far too complex, and the impact of the media generally on those outcomes is far too diverse to lie at the foot of any particular "cause." Instead, with respect to the importance of scientific evidence, there is a media impact on juror verdicts that is multifaceted. We therefore propose an indirect effects model of this mediated adjudication process.

An indirect effects model of mediated adjudication does not assume a direct or linear cause-effect relationship between criminal trial outcomes and any other variables—including the "CSI effect," the "tech effect", and the "mass media effect" included. Nor does this model assume that guilty versus not guilty verdicts can be correlated with selected variables capable of discerning, let alone predicting, the behavior of juries, judges, or attorneys. Rather, an indirect effects model assumes a reciprocal system of mutually influencing factors where behavioral outcomes are not overly determined, but may vary considerably, especially in relation to the complexity of the criminal case. In other words, a "CSI effect," a "tech effect," or a "mass media effect," alone or in combination, represents a few of the more conspicuous social features that

may, in interaction with a variety of other cultural and individual factors, affect the outcomes of criminal adjudication.

Thus far, we have defined the “*CSI* effect” and the “tech effect” and we have subjected these to a variety of empirical examinations, including path and multivariate analyses, but we have yet to define or test for “mass media” or “media effects.” Of course, when we examine a specific dramatic series like *CSI* or *Law and Order*, more particular media sources like radio, films, newspapers, or cell phones, or more generally, various justice-related programming on television, we are in effect examining the various stables of mass communication or what may collectively be referred to as “media effects.”

At the same time, “media effects” or “mass media” also refer to the increasing ubiquity and complexity of the way in which both the material and virtual realities of crime and justice are mediated throughout evolving technologies and mass culture. In a sense, we have also tested indirectly, for “media effects” when we tested for the “*CSI* effect” and the “tech effect.” While the data from the Washtenaw County study and Wayne County study have indicated that absence of a “*CSI* effect” on juror decision making, and showed mixed and overlapping support for a combination of tech and justice-related television viewing, any effect whatsoever is proof of a “mass mediated effect.” In terms of the indirect effects model, we assume “media effects” as a given or a constant, and at the same time conceive of “media effects” as having their own sphere in a triangulated relation for the mythical “*CSI* effect” and the “tech effect” depicted in Figure 1.

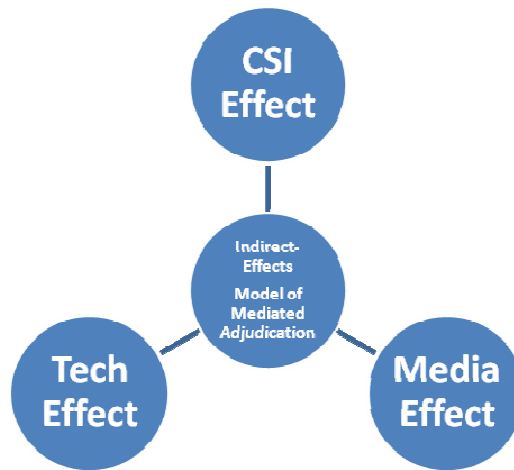


Figure 1

With respect to the two spheres of the indirect effects model for which we directly tested (the “*CSI* effect” and “tech effect”), the Wayne County study data reveals that while there is a significant rise in the expectations for the presentation of scientific evidence by those jurors exposed to various justice-related television programs, a much smaller rise for those exposed to *CSI*-type dramatic programs, and an even smaller rise for those exposed to various media sources, juror verdicts were generally unaffected by any of these. In short, when it comes to juror behavior and the acquittal or conviction of criminal defendants, the “*CSI* effect” is, in fact, a myth. However, like many other myths circulating throughout the criminal justice system and society in general, these myths may have real consequences.¹⁰¹

Prosecutors, judges, defense lawyers, and other law enforcement actors firmly believe in the “strong prosecutor” myth, that they themselves in collaboration with the news media

¹⁰¹ Harold E. Pepinsky and Paul Jesilow. *Myths that Cause Crime*. Cabin John, MD: Seven Locks. (1994); Robert M. Bohm and Jeffery T. Walker (eds.) *Demystifying Crime and Criminal Justice*. Los Angeles, CA: Roxbury Publishing Company (2006).

manufactured what came to be known as the “CSI effect.”¹⁰² For example, survey research of prosecutors, defense attorney, and judges demonstrates that 79 percent of these legal actors perceive that the “CSI effect” is real.¹⁰³ They believe that forensic-based television programs have influenced jury decisions.¹⁰⁴ Similarly, research has also demonstrated that based on these perceptions of jurors’ alleged behavior or by actually watching these shows for themselves, prosecutors and defense attorneys, if not necessarily judges, have altered their own behaviors, for example, during their evidence evaluation, voir dire, opening and closing statements, and the cross-examination of expert witnesses.¹⁰⁵ It has led prosecutors to introduce “negative evidence”¹⁰⁶ to suggest to jurors that the public taxpayers cannot economically afford to perform scientific tests.¹⁰⁷ To ask the judge to instruct jurors that the production of scientific evidence is not necessarily part of the government’s burden of proof.¹⁰⁸ Thus the myth of the “CSI effect” turns into a reality for the jurors at least insofar as it is reflected in the reactive conduct of the trial actors.

¹⁰² See Maricopa County: The CSI Effect and its Real-life Impact on Justice; a Study by the Maricopa County Attorney’s Office (June 30, 2005), and the discussion thereof in Andrew P. Thomas, *The CSI Effect on Jurors and Judgments*, 115 Yale L. J. Pocket Part 70 (2006).

¹⁰³ Monica L. P. Robbers, *Blinded by Science: The Social Construction of Reality in Forensic Television Shows and its Effect on Criminal Jury Trials*, 19 Crim. Just. Pol’y Rev. 84 at 91-98 (2008).

¹⁰⁴ *Id.*

¹⁰⁵ See Donald E. Shelton, *Twenty-First Century Forensic Science Challenges for Trial Judges in Criminal Cases: Where the “Polybutadiene” Meets the “Bitumen”*, 18 Widener L. J. 309 (2009).

¹⁰⁶ *Id.* at 378-381.

¹⁰⁷ See, e.g. *People v. Compean*, No. A111367, 2007 WL 1567603, at *8 (Cal. Ct. App May 31, 2007), discussed in Shelton, *supra* note 54 at 385.

¹⁰⁸ See e.g. *United States v. Saldarriaga*, 204 F.3d 50 (2d Cir. 2000); *United States v. Mason*, 945 F.2d 219 (4th Cir 1992); *Evans v. State*, 922 A.2d 620 (Md. Ct. Spec. App. 2007); and the discussion in Shelton, *supra* note 54 at 88-390.

Finally, and importantly, in terms of an indirect effects model of mediated adjudication, the same research has supported a weak rather than a strong prosecutor effect. Hence, the belief to date by legal actors in the myth of a “*CSI* effect” on jurors’ decision-making has already had real consequences, and in all likelihood, we speculate, will continue to do so, whether or not criminal attorneys become educated about the myth of the “*CSI* effect” on jurors’ decision-making. We believe that is the case because it is not any one of the mediated effects—*CSI*, tech, or mass media—acting alone but rather in some kind of interaction as illustrated in Figure 1.

Accordingly, we contend that it makes more sense when trying to understand the workings of a criminal trial not to focus on any of the adversarial players (e.g., judges, attorneys, juries, expert witnesses) in isolation, without bringing them all back into the adjudication process as a whole. Similarly, we would also argue that when examining the impact of other social forces (e.g., mass media, *CSI*, technology), that analysts do so in the context of these interacting with each other as well as with other variables such as class, race, gender, education, and so on. Lastly, we believe that the Indirect Effects Model of Mediated Adjudication is one viable way of conceptualizing these interacting relationships.