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EFFICIENCY AND COST: THE IMPACT OF VIDEOCONFERENCED HEARINGS ON BAIL DECISIONS

SHARI SEIDMAN DIAMOND,* LOCKE E. BOWMAN,** MANYEE WONG*** & MATTHEW M. PATTON****

I. INTRODUCTION

Over the course of the past century, bail decisions have been affected by two important developments that threaten the due process rights of defendants. First, the American criminal justice system expanded the reasons used to deny bail or to set high bond amounts. Second, and perhaps not surprisingly in view of the increasing pressure placed on courts by a growing docket of cases, American courts began to experiment with technology as a way to reduce costs, including those created by the growing volume of cases. The convergence of these two trends culminated in a perfect storm in 1999 when Cook County, Illinois instituted the practice of holding bail hearings for most felony cases using a closed circuit television procedure (CCTP) that allowed the defendant to remain at a remote location during the bail hearing.

The assumption that justified the implementation of the video system, as with many criminal justice system reforms, was that it would reduce costs without disadvantaging defendants. We examine here the history that led Cook County to conduct bail hearings using the CCTP and the actual impact that the change from live hearings to the CCTP produced for bail outcomes. We begin in Part II by tracing the expansion of bail from a mechanism designed to ensure that the defendant would appear for his trial.

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to one that reduced the likelihood that the defendant would engage in criminal behavior before being tried, that is, to achieve preventive detention. Next, in Part III, we consider the growth of technology that made it possible to hold remote bail hearings using the CCTP and how courts have generally responded to legal challenges to the growing use of technology in the justice system. Part IV outlines Cook County’s change in policy in 1999 that brought the CCTP for bail hearings as well as the federal lawsuit initiated in 2006 that challenged the use of the CCTP for bail hearings, and our analysis of the impact of the change. Specifically, using a time-series analysis, we examine the pattern of bail decisions in Cook County for the eight years prior to and eight years following the implementation of the CCTP. The results are dramatic. We find a sharp increase in the average amount of bail set in cases subject to the CCTP, but no change in cases that continued to have live hearings. The preliminary results from this analysis were disclosed to all counsel in the litigation on December 11, 2008 and were reported in the Chicago Tribune the next day.1 The lawsuit that initially stimulated this analysis was dismissed as moot on December 15, 2008 when Cook County voluntarily returned to live bail hearings for all felony cases and implemented other changes in the bail hearing process. But questions remain about the potential uses of video technology by criminal courts in bail hearings and other proceedings. In Part V of this article, we discuss the future: the prospects and questions that should be addressed as the criminal courts deal with the twenty-first century and beyond.

II. THE HISTORICAL EVOLUTION OF BAIL

The institution of bail is deeply entrenched in our jurisprudence. It traditionally reflected the criminal justice system’s purported desire to balance the unfairness of confining, and thereby punishing, a person who has not been convicted of any offense, and is presumed to be innocent, with the need to ensure that the defendant will show up for his trial.

The origin of the bail procedure—and the fairness principle it seeks to safeguard—dates at least to thirteenth century English law. The Statute of Westminster the First of 1275 included an enumeration of non-capital offenses for which pretrial release on bail was available, thereby codifying a right (for those with financial means) not to be jailed and held prior to conviction.2 The statutory right of bail in enumerated cases laid out in the

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1 Matthew Walberg, Video Bond Court to End, CHI. TRIB., Dec. 12, 2008, at 29.
2 Statute of Westminster I, 1275, 3 Edw. 1, c. 12 (Eng.). The most penetrating and thorough treatment of the history of bail that the authors have found is Professor Caleb Foote’s pointed account, given to support his (now outdated) argument that the Eighth Amendment’s Excessive Bail Clause incorporates a constitutional right to bail. See Caleb
Statute of Westminster and in successor statutes had limits in practice, which burst into the foreground in the seventeenth century. In 1627, in *Darnel’s Case*, a group of knights who had been peremptorily jailed “by the special command” of the king sought release on bail. The judges refused. That arbitrary ruling, and other similar abuses by a judiciary beholden to the monarch, prompted the House of Commons in Parliament to adopt the Petition of Right of 1628, which Charles I accepted. The Petition of Right “brought the force of Magna Carta to bear upon pretrial imprisonment,” affirming that there was a right not to be imprisoned or detained in non-capital cases without the ability to apply for bail.

This ongoing “bail controversy,” which first produced the recognition of the underlying right to bail via the Petition of Right, shifted half a century later to questions regarding the procedure necessary to effectuate that right. The Habeas Corpus Act of 1679 included a recital regarding judicial reluctance to consider bail even in cases in which bail was appropriate: “many of the King’s subjects have beene . . . long detained in Prison, in such cases where by law they are bailable.” Among the items included in the Habeas Corpus Act, therefore, were detailed provisions designed to ensure that procedural technicalities did not prevent judges from considering the defendant’s right to pretrial release.

Finally, the English Bill of Rights of 1689 included a provision, similar to the Eighth Amendment, forbidding “excessive bail.” That provision was added to remedy Parliament’s finding that the right of bail was being “subverted” by judges who were setting bail in amounts that could not be met. These seventeenth century legislative efforts to solidify and protect the institution of bail—the Petition of Right, the Habeas Corpus Act, and the English Bill of Rights—all demonstrate, in Professor Foote’s view, that “relief against abusive pretrial imprisonment was one of those fundamental aspects of liberty which was of most concern during the formative era of English law.”

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3 See 3 How. St. Tr. 1 (K.B. 1627).
4 Foote, supra note 2, at 967.
5 Cong. Research Serv., supra note 2, at 1565.
6 31 Car. 2, c. 2 (Eng.).
7 1 W. & M. 2, c. 2, cl. 10 (Eng.).
8 Foote, supra note 2, at 968.
9 Id.
The notion that a person should not be unnecessarily detained before trial is an accepted axiom of American law as well. Yet the Eighth Amendment of the United States Constitution includes only a spare, ambiguous reference to the institution of bail: “Excessive bail shall not be required.”\textsuperscript{10} The Constitution also prohibits Congress from suspending the “privilege of the writ of habeas corpus.”\textsuperscript{11} But the Constitution is silent on whether there is an underlying constitutional right to bail.

Unquestionably, though, a long-standing American tradition allows persons with financial means accused of non-capital crimes to post security for their appearance at trial and obtain their release until that time. In America, this tradition can be traced to the seventeenth century pre-revolutionary era, roughly contemporaneous with the English bail controversy. The right to bail in non-capital cases was included in the Massachusetts Body of Liberties of 1641,\textsuperscript{12} in the New York Charter of Liberties and Privileges of 1683,\textsuperscript{13} and in the fundamental law of Pennsylvania in 1682.\textsuperscript{14} The right to bail was recognized and codified in constitutions and statutes enacted just before the federal Constitution, including the constitution of North Carolina in 1776\textsuperscript{15} and the Northwest Ordinance of 1787.\textsuperscript{16} A federal right to bail was codified in the Judiciary Act of 1789, which Congress enacted contemporaneously with its approval of the Bill of Rights.\textsuperscript{17} Then, over the span of many years following the enactment of the Bill of Rights, a large majority of the states adopted state constitutional provisions guaranteeing the right to bail in non-capital cases,\textsuperscript{18} leading one commentator to conclude that “[a] pervasive right to bail developed in America in the years after 1789.”\textsuperscript{19}

\begin{itemize}
\item \textsuperscript{10} U.S. CONST. amend. VIII.
\item \textsuperscript{11} Id. at art. I, § 9.
\item \textsuperscript{12} CONG. RESEARCH SERV., supra note 2, at 1567; see also 1 DOCUMENTS ON FUNDAMENTAL HUMAN RIGHTS 79, 82 (Zechariah Chafee ed., 1963).
\item \textsuperscript{13} 1 THE COLONIAL LAWS OF NEW YORK FROM THE YEAR 1664 TO THE REVOLUTION 111, 114 (Robert C. Cumming ed., 1894).
\item \textsuperscript{14} Laws Agreed Upon in England, in PROCEEDINGS RELATIVE TO CALLING THE CONVENTIONS OF 1776 AND 1790 25, 28 (1825).
\item \textsuperscript{15} N.C. CONST. of 1776, art. XXXIX.
\item \textsuperscript{16} Northwest Ordinance of 1787, art. II, reprinted in 1 U.S.C. LIV (2006).
\item \textsuperscript{17} Ch. 20, § 33, 1 Stat. 91 (1789) (providing that “bail shall be admitted” for a defendant in any non-capital case).
\item \textsuperscript{18} See Note, supra note 2, at 351-55 (noting that every state to enter the Union, from Kentucky in 1791 through Alaska in 1958, had a constitutional provision recognizing the right to bail in non-capital cases. As of 1976, the constitutions of 40 states guaranteed a right to bail for non-capital crimes).
\item \textsuperscript{19} Id. at 351.
\end{itemize}
Though the formal recitation of a right to bail in state and federal statutes and in state constitutions may have been commonplace, over the course of American history, pretrial release on bail has not been pervasive or anything like a universal right in practice. First, since the seventeenth century, formal recognition of the right to bail has been limited to non-capital cases.\textsuperscript{20} Throughout much of our history, capital punishment was available for many crimes other than the aggravated murder cases to which that punishment is now almost exclusively confined.\textsuperscript{21} In any such capital case, American law has always recognized that bail may be denied altogether.

Second, even in the absence of systematic data regarding the availability in practice of pretrial release on bail,\textsuperscript{22} it is safe to presume that, throughout this country’s history, pretrial release—even in non-capital cases—was far from automatic. For accused persons whose poverty precluded the posting of bail in any amount (the great majority of criminal defendants), the ability to gain release prior to trial has always turned on the magistrate’s willingness to grant non-financial release. Where the charged offense was a non-trivial one, there is no evidence that such judicial largesse was common. As Professor Foote points out, civil imprisonment for debt was commonplace in the United States throughout the nineteenth and even into the twentieth century.\textsuperscript{23} In that context, the routine pretrial incarceration of poor persons accused of a crime of violence or a serious property crime is unlikely to have provoked public ire, or even notice.

A couple of noteworthy nineteenth century judicial opinions pay lip service to the notion that a person not yet proven guilty should not be incarcerated unless doing so is necessary to secure his presence at trial. \textit{United States v. Lawrence} involved the setting of bail for the would-be assassin of President Jackson.\textsuperscript{24} The record of the case includes Chief Judge Cranch’s observation that “to require larger bail than the prisoner

\textsuperscript{20} Id. at 345.

\textsuperscript{21} See generally Raymond T. Bye, \textit{Recent History and Present Status of Capital Punishment in the United States}, 17 AM. INST. CRIM. L. & CRIMINOLOGY 234, 234, 241-42 (1926) (asserting that early colonies had as many as a dozen capital crimes and cataloguing states’ wide and non-uniform range of capital crimes as of 1926—including rape, kidnapping for ransom, train robbery, and burglary); see also Coker v. Georgia, 433 U.S. 584, 593 (1976) (stating that rape was a capital crime in sixteen states as of 1971 and that within the previous fifty years it had never been a capital crime in a majority of states).

\textsuperscript{22} The Department of Justice Bureau of Justice Statistics only began its comprehensive data compilations after the Bail Reform Act of 1984. Professor Foote’s extensive treatment of bail history cites to a few isolated bail studies from the mid-twentieth century. \textit{See} Foote, \textit{supra} note 2, at 995-96. We know of no earlier data compilations.

\textsuperscript{23} Id. at 991.

\textsuperscript{24} 26 F. Cas. 887 (C.C.D.C. 1835).
could give would be to require excessive bail, and to deny bail in a case clearly bailable by law.” 25 Bail was ultimately set at $1,500. 26 In a later case, the Supreme Court rendered this expansive reading of the federal bail statute:

The only “proper security” . . . in a criminal case, is security for the appearance of a prisoner admitted to bail. . . . The statutes of the United States have been framed upon the theory that a person accused of crime shall not, until he has been finally adjudged guilty in the court of last resort, be absolutely compelled to undergo imprisonment or punishment . . . . 27

But these isolated pronouncements did not evolve into meaningful doctrine. No American court from the founding through the mid-twentieth century grappled with the federal constitutional question of whether there is a right to bail. There has never been an occasion for any court to seriously address the disconnect between the lofty ideal that the presumptively innocent criminally accused person should not be unnecessarily incarcerated before trial, on the one hand, and the highly discriminatory effects upon the poor of the institution of bail in practice, on the other. During much of our history, there is virtually no record of judicial concern about “relief against abusive pretrial imprisonment,” the issue that Professor Foote found so dominant in the formative phase of English law. 28

For a brief window of time, prompted by executive and judicial abuses in the post-World War II era, it appeared that the Supreme Court might recognize a constitutional right to bail as a bulwark against such abuses. In the 1951 case of Stack v. Boyle, 29 the Court refused to uphold the bail set for twelve defendants accused of sedition under the Smith Act. 30 The bail set in that case—$50,000 for each defendant—was obviously intended to ensure the punitive pretrial incarceration of the defendants, not to guarantee

25 Id. at 888. Lawrence had fired a pistol twice in the President’s direction, but had missed both times, leading Judge Cranch to the view that, since no actual battery had occurred, the offense was a bailable one. Id. at 887-88.
26 Id. at 88.
28 Controversies regarding unjustified or arbitrary detention played out in different contexts, such as the availability of the writ of habeas corpus. See, e.g., Ex parte McCordle, 74 U.S. (7 Wall) 506 (1869).
29 342 U.S. 1 (1951).
30 18 U.S.C. § 2385 (Supp. IV 1951). The Smith Act, which made it a crime, among other things, to “teach[] the . . . desirability” of overthrowing any state or the federal government by violence, id., furnished the basis for a number of controversial prosecutions of union leaders, Communists, and other leftists during the 1940s and 1950s. See, e.g., Ellen Schrecker, The Age of McCarthyism: A Brief History with Documents 49-53 (2d ed. 2002) (describing the Smith Act trial of Communist Party leaders over the course of eleven months in 1948 and 1949, which ultimately reached the Supreme Court as Dennis v. United States, 341 U.S. 494 (1951)).
their presence at the trial. Writing in dicta, the Court commented that “[t]he
traditional right to freedom before conviction permits the unhampered
preparation of a defense, and serves to prevent the infliction of punishment
prior to conviction. . . . Unless this right to bail before trial is preserved, the
presumption of innocence, secured only after centuries of struggle, would
lose its meaning.”  

Without elaboration, Stack also indicated that there were
“constitutional standards for admission to bail.” If, as Stack hinted, a
constitutional “right” to bail were to be found—either by implication from
the Eighth Amendment’s Excessive Bail Clause or as a requirement of
substantive due process—then it could well follow that the sole legitimate
purposes for requiring bail as a condition of pretrial release are to ensure the
defendant’s attendance at trial, to protect the safety of witnesses, and
otherwise to protect the integrity of the criminal trial process to follow. Thus,
setting bail for some other purpose—in order to prevent the defendant
from committing additional crimes prior to trial and to protect the public
from the defendant’s perceived criminal propensities, for example—would
be “excessive,” procedurally unfair, or both.

The Stack decision led Professor Foote, writing in 1965, to envision a
“[c]omning [c]onstitutional [c]risis in [b]ail” in which the Court would
address the existence of a constitutional right to bail and, Foote imagined,
would be forced to confront, as a constitutional matter, the pervasive and
disturbing “pretrial imprisonment of the poor solely as a result of their
poverty, under harsher conditions than those applied to convicted
prisoners.” No such constitutional crisis ensued, however. Instead, the
Supreme Court shut the door on the existence of a constitutional right to
bail in United States v. Salerno, a case challenging the constitutionality of
the federal detention statute’s provision permitting federal judicial officers
to consider, inter alia, whether pretrial release of the defendant would be a
danger to the public. The Court upheld this form of preventive detention,
approvingly quoted dicta from an earlier case to the effect that the Eighth
Amendment affords no right to bail, and made clear that neither substantive

31 Stack, 342 U.S. at 4.
32 Id. at 6.
33 See, e.g., Note, supra note 2, at 330-32; see also Brief of Respondent, United States v. Salerno, 481 U.S. 739 (1986) (No. 86-87).
34 Foote, supra note 2, at 959.
35 Id. at 960.
due process nor the Excessive Bail Clause regulate what factors may be considered in setting bail.\textsuperscript{39}

Salerno thus placed a judicial imprimatur upon the legislative movement of the 1970s and early 1980s authorizing preventive detention of defendants whose alleged crimes (or criminal histories) made them appear to be a threat to public safety; by 1984, over two-thirds of the states had adopted some kind of provision authorizing consideration of the defendant’s “dangerousness” in setting bail.\textsuperscript{40}

Pretrial release on bond, of course, remained (and remains) a fixture of the federal and state criminal justice systems, without which these systems could not continue to function.\textsuperscript{41} Nonetheless, while many defendants are granted some form of pretrial release, substantial numbers remain in custody prior to trial, either because they have been denied bail or because the bail set by the court exceeds what they can provide to be released on bond. In 2004, the most recent year for which data are available, almost three-quarters (72.6\%) of all defendants accused of violent offenses were not released from custody prior to trial (either on bail or on some form of recognizance or conditional release). In murder cases, 77\% of defendants remained in custody prior to trial.\textsuperscript{42}

As the Supreme Court was approving more restrictive rights to pretrial release, the crime rate in the United States was approaching an all-time high, a level reached in 1991.\textsuperscript{43} In Illinois, the site of the empirical study described here, as in the rest of the country, the rate of both violent and property crime rose dramatically from 1967 through the 1980s.\textsuperscript{44} The violent crime rate in Illinois peaked in 1991 at 250\% of its 1967 rate, remaining at more than double the 1967 level through 1998.\textsuperscript{45} The property crime rate also grew substantially, doubling between 1967 and 1991, and

\textsuperscript{39} 481 U.S. at 741-55.

\textsuperscript{40} John S. Goldkamp, \textit{Danger and Detention: A Second Generation of Bail Reform}, 76 J. CRIM. L. & CRIMINOLOGY 1, 74 (1985).

\textsuperscript{41} See, e.g., Duran v. Elrod, 713 F.2d 292, 297-98 (7th Cir. 1983) (upholding a judicial order directing the release on bond of persons accused of non-violent crimes in order to eliminate jail overcrowding).


\textsuperscript{43} \textsc{U.S. Census Bureau, Statistical Abstract of the United States:} 2008 192 tbl.299 (127th ed. 2008).

\textsuperscript{44} Bureau of Justice Statistics, U.S. Dep’t of Justice, Crime and Justice Data Online, 1960-2007, \url{http://bjsdata.ojp.usdoj.gov/dataonline/Search/Crime/State/RunCrimeStatebyState.cfm} (search “Illinois” and “Violent crime rates” and “Property crime rates” from years 1960 to 2007; then follow “Get Table” hyperlink) (last visited Aug. 28, 2010).

\textsuperscript{45} \textit{Id.}
staying well above its 1967 rate throughout the 1990s. Thus, the support for restrictive bail policies and increased pressure on the system caused by high crime rates converged to encourage courts to find efficient ways to handle the demands placed on them. They found welcome potential in developing technology.

III. THE EXPANSION OF TECHNOLOGY AND JUDICIAL RESPONSE

The legal system is generally slow to embrace new technology. Yet many courts have responded with enthusiasm to video technology, with its promise of convenience and cost savings. Although videoconferencing was technologically “possible since the creation of the television,” it became less prohibitively expensive by the early 1990s with the advent of digital technology.

Videoconferenced hearings have become increasingly common in legal proceedings, where their adoption is fueled by the attractions of convenience and the reduction of transportation and other costs associated with live proceedings. Videoconferenced hearings also have the benefit of reducing safety concerns when prisoners or potentially volatile mentally disturbed individuals are involved, because transporting those individuals to court for a live hearing may pose a security risk. All of these considerations have led to sharp increases in the use of remote video feeds in conducting administrative and civil proceedings, as well as hearings dealing with criminal matters ranging from bail to sentencing.

Courts are not the only beneficiaries of this technology. Some courts report that defendants who wish to avoid the travel costs of appearing for a hearing in a misdemeanor case appreciate the availability of a lower cost method of participating in the proceeding.

Illinois was a pioneer in the use of video technology, but it was followed soon by other states. “An Illinois court first used video technology to conduct videophone bail hearings in 1972.” Soon after, in 1974, “[a] Philadelphia court installed a closed-circuit television system for

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46 Id.
preliminary arraignments.”51 “In the . . . 20 years [following] these initial experiments, . . . courts in 17 states . . . invested in videoconferencing systems,” primarily for use in arraignments.52 By 2002, over half of the states permitted some types of criminal proceedings to be held by videoconference.53

The use of videoconferencing also spread to the federal courts, spurred on by the Prison Litigation Reform Act of 1995, which required courts “to the extent practicable” to avoid removing petitioners from the prison facility for pretrial proceedings in prison condition cases.54 The Act permitted proceedings “in which the prisoner’s participation is required or permitted” to be held “by telephone, videoconference, or other telecommunications technology.” The 1996 legislation that followed endorsed this technology “as a way to [reduce] security [threats] and costs associated with transporting prisoners to court,” but also to reduce “frivolous claims by prisoners . . . looking for a way to spend . . . time out of prison.”55

Amendments to Federal Rules of Criminal Procedure 5 and 10, which went into effect on December 1, 2002, permit videoconferencing for initial appearance and arraignments, but only with the defendant’s consent.56 Although a proposed amendment to Rule 26 would have permitted videoconferencing for presentation of live testimony during trial, the change was rejected by the Supreme Court because of concerns under the Confrontation Clause of the Sixth Amendment.57

Defense attorneys, legal scholars, and judges have offered a variety of arguments against the use of videoconferencing in criminal cases. They have argued that the use of videoconferencing impairs the fairness and integrity of criminal proceedings in a variety of ways:

Where witnesses testify outside of the presence of the defendant, the defendant is deprived of the opportunity for a physical meeting—a

51 Id.
52 Id.
53 Gerald D. Ashdown & Michael A. Menzel, The Convenience of the Guillotine?: Video Proceedings in Federal Prosecutions, 80 DENV. U. L. REV. 63, 76 (2002). “Arraignments and initial appearances [were] the proceedings most commonly permitted to be conducted by [videoconference].” Id. at 76 n.95.
55 Id.
56 Id. at 213-14.
confrontation—with those who provide evidence against him, an 
arguable violation of the Sixth Amendment’s Confrontation Clause.\(^58\)

Where the defendant and his counsel are physically separated during a 
hearing, the defendant loses the opportunity to pass notes to his 
counsel or to have an impromptu whispered conference with counsel, 
arguably an infringement of the Sixth Amendment right to counsel.\(^59\)

Where the defendant is “present” for a proceeding as no more than an 
image on a video monitor, there is a diminution of the court’s ability 
to gauge such matters as the defendant’s credibility, his competence, 
his physical and psychological wellbeing, his ability to understand the 
proceedings, and the voluntariness of any waivers of rights that the 
defendant may be called upon to make—all of which raise serious 
procedural due process concerns.\(^60\)

Finally, whenever the defendant is not physically present before the 
court, the court or other fact-finder loses the opportunity to respond to 
the immediacy of the defendant’s human presence and the gravity of 
the proceeding is diminished, arguably causing a violation of 
procedural and substantive due process.\(^61\)

Conducting a full criminal trial using CCTP would undoubtedly 
present grave Confrontation Clause concerns, among others. Before a court 
may receive testimony from even a single witness by means of 
videoconference, the state must demonstrate, as to that witness, that

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\(^58\) In *Maryland v. Craig*, 497 U.S. 836, 844 (1989), the Supreme Court noted that a 
“face-to-face meeting” between the defendant and the witnesses appearing against him is a 
literal requirement of the Confrontation Clause. The Court went on to hold that an 
“important state interest” can trump that requirement; found such an interest in sparing a 
child victim-witness the ordeal of meeting her abuser in court; and therefore upheld the 
decision to allow the child’s testimony by closed circuit video. *Id.* at 852. As we point out 
in the text below, the use of CCTP to transmit the defendant’s image into the courtroom in 
criminal cases has largely been confined to hearings in which no witnesses are anticipated to 
testify—and, thus, the Confrontation Clause issue has not been addressed in any of the 
reported decisions regarding CCTP that the authors have found.

\(^59\) Commentators have noted that the inability of an attorney to be in two places at once 
(both in the courtroom and at a remote location with her client) poses communication 
problems that could inappropriately burden the right to counsel. *See, e.g.*, 
*Videoconferencing in Criminal Proceedings*, supra note 54, at 217. A version of this 
contention was laid out in the complaint in *Mason v. County of Cook*, No. 06 C 3449 (N.D. 
Ill. 2006), discussed in Section IV, *infra*. But the court never ruled on the Sixth Amendment 
question.

\(^60\) *See, e.g.*, United States v. Algere, 457 F. Supp. 2d 695, 700 (E.D. La. 2005) (rejecting 
the defense argument and reasoning that video afforded the court an equal opportunity to 
observe the defendant and assess his competence as if the defendant were physically 
present).

\(^61\) *See, e.g.*, United States v. Navarro, 169 F.3d 228, 239 (5th Cir. 1999) (“[T]elevision is 
no substitute for direct personal contact. Video tape is still a picture, not a life.”) (quoting 
Stoner v. Sowders, 997 F.2d 209, 213 (6th Cir. 1993)); United States v. Lawrence, 248 F.3d 
300, 304 (4th Cir. 2001).
videoconferencing, as opposed to live testimony, is “necessary to further an important state interest.”\footnote{Maryland v. Craig, 497 U.S. 836, 852 (1989).} Such an interest has been found where videoconferencing will protect the emotional and psychological wellbeing of a child sexual assault victim.\footnote{Id.} But, to the authors’ knowledge, no jurisdiction has suggested that achieving the kinds of efficiencies that CCTP affords is sufficiently “necessary” and “important” to justify dispensing with the defendant’s physical presence for a criminal trial.\footnote{The Supreme Court’s ongoing concern with protecting the Confrontation Clause rights of defendants was on display in Melendez-Diaz v. Massachusetts, 129 S. Ct. 2527 (2009), where the court found that the admission of certificates claiming the substances analyzed were cocaine, offered in place of testimony from the analysts, violated the Confrontation Clause. \textit{Id.} at 2532. This case, and the Court’s rejection of proposed amendments to Rule 26 of the Federal Rules of Criminal Procedure, suggests that the Court would swiftly and firmly condemn use of CCTP for a criminal trial. \textit{See Videoconferencing in Criminal Proceedings, supra} note 54, at 214.}

In contrast, the lower federal and state courts have been generally, though not universally, receptive to the use of CCTP for criminal proceedings prior to the trial itself. At the far end of the spectrum, the courts have had little difficulty with videoconferenced arraignments, which have been uniformly upheld.\footnote{See, e.g., \textit{In re} Rule 3.160(a), Fla. Rules of Criminal Procedure, 528 So.2d 1179 (Fla. 1988); People v. Lindsey, 772 N.E.2d 1268 (Ill. 2002); Commonwealth v. Ingram, 46 S.W.3d 569 (Ky. 2001); State v. Phillips, 656 N.E.2d 643 (Ohio 1995); Commonwealth v. Terebeniec, 408 A.2d 1120 (Pa. Super. Ct. 1979).} No witnesses testify at arraignment, eliminating Confrontation Clause concerns. Although in some states arraignment is considered a “critical stage,” and the defendant is therefore entitled to counsel under the Sixth Amendment, the largely ceremonial and perfunctory nature of the arraignment process leaves little or no need for on-the-spot consultations between the defendant and his lawyer.\footnote{See Hamilton v. Alabama, 368 U.S. 52 (1961).} No judicial decisions are made at arraignment, and, thus, due process concerns are also absent.

Significantly more problematic are proceedings in which the court must accept a defendant’s waiver of rights, make a judgment regarding the defendant’s competence, suitability for involuntary medication, or the admissibility of evidence, or render a decision as to the appropriate punishment. Here the decisions are divided. Some courts have held that a court may accept a defendant’s plea of guilty and waiver of rights using CCTP,\footnote{See, e.g., \textit{State v. Peters}, 615 N.W.2d 655 (Wis. Ct. App. 2000).} while others have held that the Constitution requires the defendant’s physical presence for such hearings.\footnote{See, e.g., \textit{People v. Stroud}, 804 N.E.2d 510, 519 (Ill. 2004).} One court has held that...
it is permissible to use CCTP to conduct a Sell\textsuperscript{69} hearing on whether the defendant should be involuntarily medicated to render him competent to stand trial.\textsuperscript{70} Another court has held that it is constitutionally permissible to conduct a sentencing hearing by videoconference.\textsuperscript{71} Other courts have held or implied that it would violate the defendant’s constitutional rights to use closed circuit video for a sentencing hearing.\textsuperscript{72}

The authors have found only one case ruling on the constitutionality of using CCTP to conduct a bail hearing.\textsuperscript{73} Bail hearings are not typically an occasion for witnesses to testify against the defendant (the state usually proceeds by way of proffer as to the seriousness of the crime and the defendant’s criminal history) and, thus, Confrontation Clause problems are generally absent. On the other hand, bail hearings do require a judicial determination as to the defendant’s trustworthiness and character—i.e., the likelihood that he will in fact appear for trial if released.\textsuperscript{74} There is certainly reason to believe that the opportunity to physically observe the defendant would contribute information that would be useful for that determination.\textsuperscript{75} Given that the defendant’s freedom prior to trial is a matter of great consequence, there is at least a serious argument that procedural due process requires the defendant’s physical presence at a bail hearing.

It is important that the defendant and his counsel be able to communicate effectively during the course of a bail hearing. The defendant may, for example, be able to point out errors in the records of his criminal history or to provide mitigating details regarding past convictions that will greatly assist counsel in presenting the case for a non-financial release or a low bond. Obviously, such communications must occur immediately if counsel is to be able to make use of his client’s information during a fast-

\textsuperscript{69} Sell v. United States, 539 U.S. 166 (2002).
\textsuperscript{70} United States v. Algere, 457 F. Supp. 2d 695 (E.D. La. 2005).
\textsuperscript{72} See, e.g., United States v. Lawrence, 248 F.3d 300 (4th Cir. 2001); United States v. Navarro, 169 F.3d 228 (5th Cir. 1999).
\textsuperscript{73} LaRose v. Superintendent, Hillsborough County Corr. Admin., 702 A.2d 326, 329 (N.H. 1997), discussed infra at Section V, holds that videoconferenced bail hearings are constitutionally permissible.
\textsuperscript{74} Under the federal detention statute, for example, the judicial officer conducting the hearing is required to assess the “character, physical and mental condition” of the defendant in assessing his suitability for pretrial release. See 18 U.S.C. § 3142(g)(3)(A) (2006).
\textsuperscript{75} In United States v. Stanley, 469 F.2d 576 (D.C. Cir. 1972), where the court held that the decision as to the defendant’s eligibility for bail pending appeal must be made in the trial court in the first instance, the court noted that the trial court is the “superior tribunal” for making that determination because it “can come face-to-face with the primary informational sources, probe for what is obscure, trap what is elusive, and settle what is controversial.” Id. at 581-82.
paced bail hearing. In this context, therefore, separating the defendant from
counsel might be argued to infringe on the Sixth Amendment right to
counsel.\textsuperscript{76}

Where the courts have found the defendant’s presence to be a
constitutional necessity, it has generally been because of the intuition that
the defendant’s presence affects perceptions and contributes to the outcome.
For example, in holding that the defendant’s presence was required for
sentencing, the Fifth Circuit reasoned: “Sentencing a defendant by video
conferencing creates the risk of a disconnect that can occur because ‘the
immediacy of a living person is lost.’ . . . ‘[T]elevision is no substitute for
direct personal contact. Video tape is still a picture, not a life.’\textsuperscript{77} In
contrast, courts that have approved the use of videoconferencing have
assumed that closed circuit video does not detract in any meaningful way
from the quality of judicial decision making: “[T]he Court finds that its
opportunity to continuously observe [the defendant] by video
teleconference during the hearing is as effective as if [the defendant] were
to appear in person before the Court.”\textsuperscript{78}

Thus, the decisions and the arguments embody empirical assumptions
about how videoconferencing is likely to affect case outcomes and
perceptions of justice. Does video rather than live interaction deprive
the defendant of effective attorney-client communication and thus impair
adequate representation? Does video reduce the ability of the judge to

\textsuperscript{76} The Supreme Court has never ruled definitively on whether a bail hearing is a “critical
stage” of the criminal process to which the Sixth Amendment right to counsel would attach.
In \textit{Gerstein v. Pugh}, 420 U.S. 103, 122-23 (1975), the Court held that counsel was not
required at a hearing to determine probable cause and went on to suggest that states might
wish to experiment with combining bail hearings with probable cause determinations.
\textit{Gerstein}, thus, casts considerable doubt on whether there is a constitutional right to counsel
at a bail hearing. But \textit{Gerstein} did not decide the question. More recently (in an opinion that
also did not definitively rule on this question) the Court indicated that counsel might be
constitutionally required at such a combined hearing. \textit{See} Rothgery v. Gillespie County, 128
S. Ct. 2578, 2592 (2008) (“[A] criminal defendant’s initial appearance before a judicial
officer, where he learns the charge against him and his liberty is subject to restriction, marks
the start of adversary judicial proceedings that trigger attachment of the Sixth Amendment
right to counsel.”). Only the District of Columbia and eight other states have enacted
provisions ensuring that all indigent persons within their borders are represented by counsel
at bail or bond hearings. \textit{See} Douglas L. Colbert et al., \textit{Do Attorneys Really Matter? The
Empirical and Legal Case for the Right of Counsel at Bail}, 23 CARDOZO L. REV. 1719, 1724
nn.6-8 (2002) (collecting statutes). Although in practice in many jurisdictions lawyers do
not represent bond applicants, there has never been a significant Sixth Amendment challenge
to the lack of representation at a bail or bond hearing.

\textsuperscript{77} \textit{Navarro}, 169 F.3d at 239 (quoting Stoner v. Sowders, 997 F.2d 209, 213 (6th Cir.
1993)).

\textsuperscript{78} \textit{United States v. Algere}, 457 F. Supp. 2d 695, 700 (E.D. La. 2005) (approving
videoconferenced \textit{Sell} hearing).
appreciate the humanity of the defendant and reach an appropriate decision? Yet no prior empirical research has directly tested how—or even whether— videoconferencing produces results that differ from those produced by live hearings.79 Molly Treadway Johnson and Elizabeth Wiggins reviewed the available literature in 2006 and called for experimentation to fill that gap.80 We report here on a study we conducted that responds to that empirical challenge.

IV. THE CCTP: VIDEOCONFERENCE BAIL HEARINGS IN COOK COUNTY

A. THE IMPLEMENTATION OF VIDEOCONFERENCE BAIL HEARINGS AND THE GENESIS OF A LAWSUIT

Cook County, which includes Chicago and the greater metropolitan area, decided in 1999 to implement an extensive program mandating that bail hearings for most defendants arrested within the City of Chicago and charged with a felony be held via videoconference rather than at a live bail hearing attended in person by the defendant. Mirroring the approach taken with other reforms embracing video technology, Cook County implemented a general order directing that most bail hearings in felony cases conducted in Chicago’s Central Bond Court “shall be conducted by means of closed circuit television.”81 The only felonies excluded from this 1999 General Order were the most serious felony cases (typically homicides and serious sexual assaults) in which Illinois law permitted the State to seek denial of bond in any amount.82

Cook County’s introduction of the CCTP was the final step in a staged process of centralizing the bail hearing procedure for Chicago arrests. In the last months of 1998, all such bail hearings were transferred for hearing to the Chicago criminal courts building on the city’s West Side. This replaced a system, in effect for many years previously, in which bail hearings had been conducted in police “branch” courts located throughout Chicago. It was felt that a centralized approach would further the interests of uniformity and efficiency.83 The bond amounts would be more uniform—and, in that sense, fairer—if they were all set by judges in a centralized court rather than by a half dozen different judges sitting in

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79 There is even a possibility that videoconference technology helps some defendants by making them appear less dangerous than they might in person.
80 Videoconferencing in Criminal Proceedings, supra note 54, at 225.
81 General Order 99-6 of the Circuit Court of Cook County, Illinois (1999).
82 Id.
83 Comments of Judge Robert A. Bastone, one of the architects of the Central Bond Court reform, in a meeting with bar leaders held in the chambers of the Chief Judge in mid-July 2005.
courtrooms around the city. Efficiency would also be served: all persons arrested within the past twenty-four hours anywhere in Chicago would be transported to holding pens in the basement of the Chicago criminal courts building. That building is connected by underground tunnel with the Cook County Jail, which would enable relatively swift processing of the defendants (either their release or their admission to the jail) following the hearings. Adding the CCTP to the Central Bond Court in 1999 was intended to further promote efficiency by enabling swift disposition of all the cases on the call by allowing the defendants to “appear” at the bail hearing via video transmission from a basement room located a few steps from the holding pens.

No research was conducted before or during the initial period when the 1999 General Order was implemented to evaluate its likely or actual effect. In practice, use of CCTP in Central Bond Court had several troubling features:

Poor-quality technology. The defendant’s image was shown on video monitors visible to the judge and to spectators (who sit in a gallery separated from the well of the courtroom by a Plexiglas shield), but not to the prosecutor or defense counsel. The image on the monitors was black and white, the contrast was poor (making dark-skinned defendants particularly difficult to see) and the screens sometimes flickered.

Inadequate defense preparation. Because of the logistics of transporting arrestees to the criminal courts building each day, public defenders (who handled the overwhelming majority of the cases) complained that their opportunity to consult with their clients prior to the hearings was extremely limited. On a daily basis, 100 to 150 bail cases were heard on the Central Bond Court call. An investigator employed by the Cook County Public Defender’s Office met each bail applicant for a few seconds at the front of the holding pen, recording basic information about each defendant onto a chart. The assistant public defender in the courtroom (who had never met the

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84 Id.
85 Id.
86 Id.
87 Two of the authors made this observation when they observed proceedings in Central Bond Court in the fall of 2008. See also Letter to Cook County Chief Judge Timothy C. Evans, Circuit Court of Cook County & Judge Paul P. Biebel, Jr., Circuit Court of Cook County (June 20, 2005) (on file with author).
88 Id.
89 Id.
90 Id.
bail applicant) parroted the information from the chart into the record as the defendant’s image flickered on the monitors in the courtroom. 91

**Extreme brevity.** The cases were heard rapid-fire. In each case, the court made a probable cause finding, 92 set bond, and continued the case for hearing on a future date—all in the space of about thirty seconds on average. 93 In so short a time frame it was impossible for the court to give any meaningful, individualized consideration to the multitude of factors that Illinois law deems relevant to the setting of bail. 94

Complaints about this system began to surface. For years, defense lawyers decried Central Bond Court as a grossly demeaning “cattle call.” 95 In March 2005, a committee of prominent bar leaders wrote an open letter to the Chief Judge of the Circuit Court of Cook County questioning the constitutionality of Central Bond Court and calling for its abolition. 96 A December 2007 report by the Chicago Appleseed Fund on the Cook County criminal justice system recommended eliminating the CCTP in Central Bond Court. 97 Privately, public defenders contended that a return to the decentralized branch court system would be preferable: under the old system, cases had received more individualized attention from the public defenders assigned to the branch courtrooms (those public defenders had handled a dozen or more bail cases each day as opposed to the 100-plus daily cases at Central Bond Court); under the old system, it was easier for family members and friends of the defendant to attend (and to be available for testimony) at a bail hearing relatively near to the defendant’s neighborhood; and under the old system the defendants had the advantage of being physically present in the courtroom. 98

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91 Id.
93 On several occasions during the pendency of the litigation described below, students from Northwestern University School of Law’s MacArthur Justice Center observed Central Bond Court and timed a sampling of the bond hearings. See also Tom McNamee, 50 Minutes ÷ 113 People = 26.55 Seconds per Case; Court System Forces Attorneys through Fast and Furious Pace, with Hardly a Hint of Justice, CHI. SUN-TIMES, June 20, 2005, at 22.
95 The term “cattle call” was frequently used to describe Central Bond Court in conversations that one of the authors had with Cook County Public Defenders and private criminal defense practitioners in 2005 and 2006.
96 A copy of the letter is on file with the authors.
98 In conversations with one of the authors in 2005 and 2006, high level members of the Cook County Public Defender’s Office, including the public defender himself, expressed their preference for conducting bail hearings in the branch courts, for the reasons stated in the text.
In 2006, Locke Bowman, of the MacArthur Justice Center, filed a class action suit in federal court in Chicago alleging that the bail hearings in Cook County’s Central Bond Court violated due process and denied bail applicants the effective assistance of counsel. The suit sought injunctive relief on behalf of all present and future bail applicants—primarily elimination of the CCTP and the institution of procedures that would permit counsel to better prepare for the individual hearings—and a declaratory judgment that the Central Bond Court hearings were unconstitutional.

The defendants in the case—the Cook County Sheriff, the Cook County Public Defender, and the Circuit Court Judge with administrative authority over Central Bond Court—never challenged the legal sufficiency of the due process and Sixth Amendment claims in the complaint. As the case progressed through discovery toward an evidentiary hearing, Locke Bowman and Shari Diamond discussed how to assess whether bail outcomes were affected by the videoconferencing system. We determined that an empirical test would be both valuable and possible. Accordingly, we gathered information from the Cook County Clerk’s Office on the initial bail hearings for all felony cases in Cook County covering the period from approximately eight and one-half years before the video system went into effect through the eight and one-half years after it was implemented.

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99 Mason v. County of Cook, No. 06 C 3449 (N.D. Ill. June 26, 2006).
100 Id.
102 It could, of course, have been argued that even in the absence of actual injury (in the form of higher bond amounts than would have been imposed in in-person and appropriately counseled hearings) the bond applicants’ constitutional rights were being violated by deficient procedures. See Carey v. Piphus, 435 U.S. 247, 266-67 (1978) (“Because the right to procedural due process is ‘absolute’ in the sense that it does not depend upon the merits of a claimant’s substantive assertions, and because of the importance to organized society that procedural due process be observed, . . . we believe that the denial of procedural due process should be actionable for nominal damages without proof of actual injury.”) (citing Boddie v. Connecticut, 401 U.S. 371, 375 (1971); Joint Anti-Fascist Refugee Comm. v. McGrath, 341 U.S. 123, 171-72 (1951) (Frankfurter, J., concurring)).
103 The data for the analysis were provided in the form of computer files supplied by Karen Landon, Project Manager in the M.E.S. Division of the Office of the Clerk of the Cook County Circuit Court, in response to a subpoena served on the Clerk of Court in Mason, No. 06 C 3449, on June 5, 2007. The subpoena requested computerized data on the felony bail hearings conducted in Central Bond Court in Courtroom 101 of the Criminal Courts building from 1991 through 1999.
B. THE DATA

A total of 645,117 felony bond decision case files were supplied by the Clerk of Cook County for felony cases that had initial bail hearings between January 1, 1991 and December 31, 2007. Each case file included: (1) the date on which a bail applicant appeared for a bail hearing, and (2) the statute number associated with the first offense with which the defendant was charged. Two-thirds of the cases also included a verbal description of the first offense with which the defendant was charged (e.g., “possession of a stolen motor vehicle”) or an abbreviation for the name of the offense (e.g., “psmv” for possession of a stolen motor vehicle).

In addition to examining changes in bond amount over time for the full set of felony cases, we also analyzed changes in bond amount over time for individual offenses. Due to the incomplete or ambiguous verbal offense descriptions in the computer files, we used a series of procedures and checks to identify the offense category for each case. We began with the statute number for the offense. The statute entries in the computer files were not formatted consistently (e.g., whether a hyphen or parenthesis was included). Because the statute numbers were not formatted consistently, we first removed all non-numeric characters from the statute codes. We then used a string function to search these numeric statute codes for the substring that uniquely identified each particular offense, allowing us to identify the offense. For example, statute codes that contained “103” were identified as possession of a stolen motor vehicle.

We used the statute number rather than the verbal offense description as the primary source for identifying the offense associated with the case because: (a) nearly one-third of the cases lacked a written offense description, and (b) the way an offense was described verbally varied substantially across entries (e.g., “psmv” or “poss stol mv” or “possession of stolen motor vehicle”). To test whether this procedure had correctly identified only the appropriate offense, we examined the offense descriptions for these cases (in this example, those with the statute code “103”) to make sure they described the right offense (in this instance, possession of a stolen motor vehicle). To verify that other cases of possession of a stolen motor vehicle had not been missed because the offense was listed under another statute number that did not contain “103,”

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104 The original data files provided by the Clerk’s Office included multiple “cases” for the same bond decision if multiple charges were involved. The single bond amount set at the bond hearing was entered in the data set for each charge. To create a data set using bond decision as the unit of analysis, we used the first (most serious) charge, giving us a total of 645,117 bond decisions. We identified cases from the same bond decision by matching on the following criteria: last name; first name; date of birth, if available; date of bond hearing; and bond amount.
we examined all of the statute numbers associated with common written
descriptions of possession of a stolen motor vehicle. We also checked to
see that the string function had not identified any group of at least fifty
cases that described a different offense. In no instance did this checking
procedure produce groups of misclassified cases. Each of the nine offenses
we analyzed separately underwent this verification process.

Both verification procedures showed that cases of each offense had
been correctly identified, that is, that we did not include cases that did not
belong or omit cases that should have been included according to the listed
statute number. The only potentially omitted cases were the 0.1% of cases
in which no statute number was provided in the data file.

We also conducted a second check on the data used in the analyses.
We identified thirty-three cases (sixteen in the pre-videoconferencing
period and seventeen in the videoconferencing period) with unusually high
bond levels, in light of the charged offense (e.g., $9,000,000 for possession
of a stolen motor vehicle). We were able to obtain the paper court files on
twenty-nine of those cases and found that ten had been entry errors,
typically involving an extra zero or two that made the amount appear ten or
one hundred times its actual value. We corrected the entries for all
analyses. We were unable to obtain the case files for two armed robbery
case outliers that had hearings in October of 1999, just after
videoconferencing was implemented. Each had a bond amount recorded as
$5,000,000. Although we conducted all analyses with and without these
two cases and found no difference in the results, the charts and table
presented here exclude the two cases because the exclusion provides more
conservative estimates of the effects.105

C. THE ANALYTIC APPROACH

We began our analysis by examining changes in bail level over time
for all cases involving offenses that were subjected to the CCTP. Then, to
examine the consistency of results across different offenses, we conducted
separate analyses on a series of offense categories that could be identified
accurately from the available data.106 These offenses were nonresidential

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105 We conducted an additional check on the ten cases which appeared in the computer
file from the Clerk’s Office as first degree murder and released on recognizance. We
obtained seven of the original ten paper files which showed that all were entry errors, two
not involving first degree murder and five having bail decisions that were not “released on
recognizance.” We corrected the errors and removed the remaining three cases from all
specific offense analyses.

106 Drug offenses were not examined separately because the recording method used in
the files did not permit us to accurately identify them. They were, however, included in the
aggregate felony case analysis.
burglary, residential burglary, possession of a stolen vehicle, unarmed robbery, armed robbery, and aggravated battery. Finally, we examined cases involving offenses that continued to be handled by live hearings following the implementation of the CCTP. They included first degree murder, second degree murder, manslaughter, and sexual assault cases. These offenses account for less than 3% of the felony cases. The virtue of looking at these cases separately is that if the implementation of the CCTP increased bond amounts, it should not have caused an increase for cases that continued to be conducted by in-person hearings. Therefore, they provide a control group for felonies that were subjected to CCTP. We examined these cases separately and compared the pattern of change for these most serious offenses, which continued to have live hearings, with the pattern of change for the remaining felonies, which shifted to closed circuit television hearings after June 1, 1999.

For each of the 204 months between January, 1991 and December, 2007, the average bond amount for cases resulting in bond decisions is computed for all outcomes examined. We graphed the resulting values and modeled the impact of the change in bail procedure that occurred on June 1, 1999 (i.e., implementation of the CCTP). All bond amounts were transformed into constant dollars using the consumer price index (CPI) provided by the Bureau of Labor Statistics to control for inflation over time. The CPI is based upon a 1982 base of 100 so a CPI of 110 indicates 10% inflation since 1982. All graphs and analyses are expressed in constant dollars.

Interrupted time series analysis is used to examine whether the change from in-person hearings to closed circuit television hearings caused a rise in felony bond amounts. We first used time series plots to assess the functional form of the time series and to visually examine the effects of the policy. We then used analytic models to quantify the amount and

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107 We analyzed all cases together as a single group. To examine the sensitivity of the result, we also excluded sexual assault cases and examined homicide cases alone. No difference was observed in the results.

108 The only cases omitted from these analyses were the small percentage (6%) of cases that resulted in denial of bail. We analyzed these cases separately in order to evaluate whether any change in the bond levels could reflect a shift away from high bond amounts to outright denial of bail.

109 With extensive time series data and a clear intervention time point—June 1, 1999—an interrupted time series analysis design provides a strong test of the immediate and long term effects of an intervention or policy.
significance of any observed changes.\textsuperscript{110} The key is to analyze whether the change in average bond mean and growth rate differ significantly from what one would expect (based on prior trajectory) if the policy had not been in place. The null hypotheses for all models are that the mean and growth rate in bond amount do not differ significantly from before to after the implementation of CCTP.\textsuperscript{111}

Errors in time series data are often correlated. For example, the bond amounts for a particular felony offense at two adjacent time points may be more similar than bond amounts set at time points that are farther apart. Failure to model this correlation may result in an underestimation of standard errors and overestimation of the significance of intervention effects. To adjust for serially correlated errors, we examine the autocorrelation and partial autocorrelation of each outcome model’s residuals to determine its correlation structure. If significant, the correlation is explicitly modeled in the error term.\textsuperscript{112} For most models, we are able to

\textsuperscript{110} Depending on the outcome, the functional form of the best fitting model may be linear (1), quadratic (2), or cubic (3). Respectively, their analytic models are as follow:

\begin{align*}
(1) \ Y_t &= \beta_0 + \beta_1(t) + \beta_2(\text{intervention}_t) + \beta_3(t \times \text{intervention}_t) + \epsilon_t \\
(2) \ Y_t &= \beta_0 + \beta_1(t) + \beta_2(t)^2 + \beta_3(\text{intervention}_t) + \beta_4(t \times \text{intervention}_t) \\
& \quad + \beta_5(t \times \text{intervention}_t)^2 + \epsilon_t \\
(3) \ Y_t &= \beta_0 + \beta_1(t) + \beta_2(t)^2 + \beta_3(t)^3 + \beta_4(\text{intervention}_t) \\
& \quad + \beta_5(t \times \text{intervention}_t) + \beta_6(t \times \text{intervention}_t)^2 \\
& \quad + \beta_7(t \times \text{intervention}_t)^3 + \epsilon_t \\
\end{align*}

where $Y_t$ is the average bond amount adjusted for inflation in the month observed at time $t$; time is a continuous variable centered at the point of intervention to indicate the month at time $t$; the addition of $t^2$ and $t^3$ in the model specifies the functional form as quadratic or cubic instead of linear; intervention is an indicator for time $t$ occurring before (intervention=0) or after (intervention=1) the policy change; and $t \times \text{intervention}$ is a continuous variable specifying the number of months after the intervention at time $t$, with $(t \times \text{intervention})^2$ and $(t \times \text{intervention})^3$ again specifying nonlinear functional forms of the model.

\textsuperscript{111} For average change in bond amount at the point of intervention, the null hypotheses are $\beta_2=0$ if model is linear, $\beta_3=0$ if model is quadratic, and $\beta_4=0$ if model is cubic. To model the change in average bond amount growth rate, a linear model is used to analyze all outcomes. Here, the null hypothesis is $\beta_3=0$ for all outcomes.

\textsuperscript{112} Most outcomes in the study have been identified as (1) first order autoregressive (AR-1) where error in time $t$ depends on the error in the previous time period; (2) first order moving average (MA-1) where error at time $t$ depends on the random shock in the previous time period; or (3) first order autoregressive, moving average (ARMA) where error in time $t$ depends on both error and random shock in the previous period. The error term, depending on its identified structure, is modeled as follows:

\begin{align*}
\epsilon_t &= \phi_1 \epsilon_{t-1} + \gamma_t \text{ if the process has been identified as a first order autoregressive; or} \\
\epsilon_t &= \gamma_t + \theta \gamma_{t-1} \text{ if the process has been identified as a first order moving average process; or} \\
\epsilon_t &= \phi_1 \epsilon_{t-1} + \gamma_t + \theta \gamma_{t-1} \text{ if the process has been identified as a first order autoregressive, moving average (ARMA).}
\end{align*}
model the autocorrelation in the error term and reduce the model’s residuals to white noise. The lone exception is armed robbery which still shows signs of autocorrelation after attempts to identify and control its correlation structure. Nevertheless, the estimates do not affect our overall conclusion and results from the best fitting models are presented.

D. THE RESULTS

The time series graph for the combined offenses subjected to CCTP shows a large change in bond amount immediately after June 1, 1999, the date when the CCPT went into effect (see Figure 1).

**Figure 1**

Average Monthly Bail Amount Over Time
Treated Offenses - Video Feed Usage

The graph also indicates that the increase was permanent. Not only did the average bond amount fail to return to pre-CCTP level, it continued to climb after the intervention. Using a log linear model (data not shown) to obtain an average rate of change in percentages before and after the implementation of the CCTP, results indicated that the average monthly rate of change in bond amount before the CCTP was significantly different from the average monthly rate of change after the CCTP. Specifically, bond amounts were decreasing at roughly 0.66% per month prior to the CCTP, but only at a rate of 0.02% (0.66 + -0.64) per month after the CCTP, thus confirming the pattern visible in the graph. Analytic results (see Table 1)
also showed a significantly greater than expected change in the average bond amount immediately after the CCTP implementation.

For all combined offenses that shifted to televised bail hearings, this change was an increase of roughly $20,958 or 51%.

To be sure that cases with high bond amounts were not occurring in the wake of the CCTP merely because judges were setting bond in cases in which they would otherwise have denied bail, we examined the rate of denied bail cases over time. In contrast to the series involving bond amount for cases subjected to the CCTP, there was little change in the percentage of treated cases that resulted in a denial of bail. The percentage of cases in which bail was denied dropped by 1% at the time that the video hearings began. The drop cannot account for the dramatic rise in average bond amount. Note that our data set and analysis of "denied bail" cases began in 1996, rather than 1991, because for some unknown reason the data set included few cases involving denial of bail prior to June of 1994 and then showed a sharp increase in cases denied bail peaking around June of 1995 before sharply declining. The percentage of cases denied bail then dropped over the time period from 1996 through 2007, from approximately 10% to under 4%. We have no explanation for the complex functional form of this time series, so we confined our analysis to the data between 1996 and 2007.

Table 1

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<th>Treated Offenses</th>
<th>Non-Treated Offenses</th>
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<td>Constant</td>
<td>33083.67***</td>
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<td>Time</td>
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<td>205.64</td>
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<td>Time x Time x Time</td>
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<td>Intervention x Time</td>
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<td>320.56</td>
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<td>Intervention x Time x Time</td>
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<td>6.80</td>
</tr>
<tr>
<td>Intervention x Time x Time x Time</td>
<td>-0.14**</td>
<td>0.04</td>
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<td>ARMA</td>
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<tr>
<td>MA (moving average - order 1)</td>
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<td>0.18</td>
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<td>AR (autoregressive component - order 1)</td>
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</tbody>
</table>

*p<0.05, **p<0.01, ***p<0.001
To test the robustness of this result, we examined separately the change in bond amount for each of the six felonies that were subjected to the CCTP: (1) armed robbery; (2) unarmed robbery; (3) residential burglary; (4) non-residential burglary; (5) possession of a stolen motor vehicle; and (6) aggravated battery. Time series graphs of these offenses (see Figures 2 to 7) again showed a clear and sharp discontinuity at the point of intervention for each of these felonies.

Analytic models confirmed the observed visual change as statistical tests showed significantly greater than expected increases immediately after the intervention. The average bond amount increase ranged from 54% to 90% depending on the offense. For armed robbery, the increase was $74,699, or 58%. For unarmed robbery, the increase was $54,227, or 86%. Residential burglary showed an increase of $53,274, or 90%; nonresidential burglary an increase of $26,592, or 64%; possession of a stolen motor vehicle an increase of $25,605, or 78%; and aggravated battery an increase of $73,024, or 70%.

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Figure 2

Average Monthly Bail Amount Over Time
Treated Offense - Armed Robbery

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114 Models associated with Figures 2-7 are available from the authors on request.
Figure 3

Average Monthly Bail Amount Over Time
Treated Offense - Unnamed Robbery

Figure 4

Average Monthly Bail Amount Over Time
Treated Offense - Residential Burglary
Figure 5

Average Monthly Bail Amount Over Time
Treated Offense - Non-Residential Burglary

Figure 6

Average Monthly Bail Amount Over Time
Treated Offense - Possession of Stolen Vehicle
To examine whether the above changes in average bond amounts over time were temporary or permanent after the intervention, we again used log linear models to examine the average monthly rate of change in percentages before and after the implementation of the CCTP. All felony offenses subjected to the CCTP showed decreasing average bond amounts that ranged from -0.2% to -1.0% prior to the intervention. After the policy change, these offenses showed increasing bond amounts of roughly 0.14% to 0.57% over time. All changes in rate before and after intervention for the above felonies were statistically significant. To confirm that the CCTP was the cause of the increase in bond level, we examined average change in bond amount for the combined homicide and serious sexual assault cases. These are offenses that continued to have live hearings and therefore could serve as a control group. If the CCTP caused the observed rise in bond amounts for treated felonies (those subjected to the CCTP), we should see no greater than expected significant change for the non-treated felonies (those not subject to the CCTP). Indeed, results show that immediately after the CCTP went into effect, the average bond amount for the non-treated felonies rose an insignificant 13% (see Figure 8 and Table 1), while the average for treated felonies rose a significant 51%.115

115 See supra Figure 1 and accompanying text.
After the CCTP went into effect, bond amounts for the treated cases generally held steady with results showing a close to zero decrease of -0.02% per month, while the non-treated felonies steadily decreased at a monthly rate of 0.42%.

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**Figure 8**

Average Monthly Bail Amount Over Time
Non-Treated Serious Offenses - No Video Feed Usage

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**E. SUMMARY OF FINDINGS ON THE IMPACT OF THE CCTP**

The results of the analysis show that average bond amounts rose substantially following the implementation of the CCTP. The change cannot be attributed to general trends or seasonal variations as none were observed. As both the graphs (Figures 1-7) and the statistical models clearly reveal, the substantial increase in average bond level immediately followed the implementation of the CCTP on June 1, 1999. The average bond amount for the offenses that shifted to televised hearings increased by an average of 51% across all of the CCTP cases. In separate analyses, increases of between 54% and 90% occurred for six major felonies subjected to the CCTP. In contrast, the average bond levels for the combined serious sexual assault and homicide cases, which continued to have live hearings, changed an insignificant 13% (Figure 8) and when analyzed alone, the homicide cases showed almost no change at all in average bond level following the implementation of the CCTP. These results demonstrate that the change in bail procedures not only led to a large
and abrupt increase in the average bond amount for felony cases handled by televised bail hearings after June 1, 1999, but also produced a steady rise in bond levels over time.

V. THE FUTURE OF VIDEOCONFERENCE HEARINGS: LESSONS LEARNED AND REMAINING QUESTIONS

The results from the Cook County Bail Study show that the defendants were significantly disadvantaged by the videoconferenced bail proceedings held between 1999 and 2009. This finding provides the evidence whose absence defeated the bail applicant in LaRose v. Superintendent when the court rejected the applicant’s due process argument.116 There, the court found no evidence that the use of video “would adversely bias a judge’s opinion of a defendant.”117 The court specifically relied upon the fact that “[n]o evidence was offered to suggest that judges set bail at a higher amount for defendants who were arraigned by the video procedures than by in-person procedures.”118 The substantial increases in bail levels that immediately followed the implementation of videoconferenced bail hearings in Cook County, and which occurred only for the offenses that shifted to videoconferenced hearings, provide precisely the evidence that was missing in LaRose and should raise questions about the harmful effects of videoconferenced hearings on defendants.

Looking to the future, important questions remain. First, a variety of influences may account for the disadvantage experienced by the defendants subjected to the videoconferenced bail hearings implemented in Cook County in 1999. The picture quality and sound available today are far superior to the technology that existed when the equipment was installed in Cook County. It may be that the quality of the available video display was too degraded or the size of the video monitor was too small to enable the judge to adequately view the defendant. In addition, in order to watch the judge in the courtroom on the monitor, the defendant in Cook County had to look at the monitor rather than at the camera that was capturing his own image and projecting it into the courtroom. He thus could appear on the courtroom monitor as if he was avoiding direct eye contact. Modern technology with a camera embedded in the viewing monitor would be able to eliminate this problem. The inability of the defendant to see the judge clearly may also have discouraged the defendant from speaking up when it would have helped him to say something. We cannot tell from the currently available research whether the defendant’s willingness and ability to

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117 Id.
118 Id.
communicate would be unimpaired if better technology were used. Although modern business may be rapidly embracing the ability to hold meetings and conduct collaborative work with videoconferencing equipment, the typical defendant who appears in court for a bail hearing may find such equipment both unfamiliar and alienating.

The particular videoconferencing technology used in Cook County was not the only potential explanation for the negative outcomes the program produced. Nor is it clear that modern technology could eliminate what may be inherent flaws in a procedure that has the defendant in a remote location. The remote location of the defendant meant that attorneys had little or no opportunity to gather information from the client before the hearing. Information that could have made the defendant a more plausible candidate for pretrial release was typically limited to that gleaned by a representative from the public defender’s office who asked the defendant a few questions in the holding cell before the hearing began and provided the answers to the public defender in the courtroom. In an important experiment, Douglas Colbert, Ray Paternoster, and Shawn Bushway provided legal representation in the courtroom for defendants who participated in their bail review hearings only through a two-way video and audio system. They showed that those defendants randomly selected to receive legal representation were more likely to obtain bail reductions and to be released on their own recognizance. The attorneys had an opportunity to gather significant information on the defendants before these hearings, so it is unclear whether it was the additional information that the attorneys were able to provide to the court or the mere participation of an advocate for the defendant that produced the reductions, but the study highlights the potential importance of the role that attorneys can play in bail hearings.

Many of these procedural defects could be reduced or eliminated. Others would be more difficult to overcome. The location of the defense attorney in the courtroom and not next to her client may prevent crucial consultation. To remedy that loss, it would be necessary to provide the defendant with a way to communicate privately with his attorney. The remote defendant would have to be able to signal the attorney in the courtroom that he needs to have a private conversation. A defendant might, for example, be given a device that he could activate to cause a paired receiver to vibrate in his attorney’s pocket to signal a desire to communicate privately. Unlike the brief whisper that can occur when the defendant and his attorney are standing side-by-side, this private conversation would

\[119\] Colbert et al., supra note 76.

\[120\] Id. at 1720.
require a private communication channel to preserve confidentiality and could only occur through a somewhat awkward disruption in what is typically a brief hearing.

Finally, there may be some aspects of live presence that affect the believability of an individual. Indeed, studies comparing credibility judgments and other ratings of live versus televised child witnesses have found that the method of viewing affected witness ratings. For example, mock jurors rated child witnesses who testified in person as more accurate, intelligent, attractive, and honest than children who testified on closed circuit television. Similarly, studies in educational settings suggest that some nonverbal behaviors by teachers, such as facial expression, tone of voice, and eye gaze, influence how students evaluate the teacher. In immigration hearings, in which the courts place great importance on the testimony of the asylum applicant, there has been a movement to hold asylum hearings by videoconference, a move sanctioned by Congress in 2006 when it shortened the removal period for detained aliens. A recent study of decisions in asylum hearings during 2004 and 2005 compared the rate of asylum grants for individuals who had in-person and video conference hearings before the Congressional mandate went into effect. The vast majority of hearings were in-person and it is not clear how cases were selected for videoconferenced hearings, but individuals who had in-person hearings were nearly twice as likely to be granted asylum as those who had a hearing held by video-conference.

If there is something about the presence of a live individual that cannot be replicated, even with modern technology, then videoconferenced bail hearings cannot avoid a sacrifice of information that may threaten the quality of bail decisions, and a dehumanization that encourages a harsher response than would occur if the judge were faced with a live individual.


125 Id. at 280.

126 Even changes in camera focus can dramatically affect lay and professional judgments about the voluntariness of a confession. See, e.g., G. Daniel Lassiter et. al., Evidence of the Camera Perspective Bias in Authentic Videotaped Interrogations: Implications for Emerging
Nor can any hearing that entails judgments about a defendant or other witness. At this point, we simply cannot tell which of the differences between live and videoconferenced hearings, or which combination of these differences, was responsible for the large jump in bond levels that followed the implementation of videoconferenced bail hearings in Cook County. The results do tell us that Cook County Chief Judge Timothy Evans was wise to reinstate live hearings in light of the costs that the videoconference procedure, as implemented, imposed on defendants subjected to it.

The attractions of technology invite courts to implement these apparently cost-saving measures, particularly when the demand for court resources is high. Ironically, an overeager welcome of technology can impose costs of its own. By boosting bond levels and decreasing the ability of defendants to obtain release pending trial, videoconferenced bail hearings may actually impose additional financial costs on the justice system by leading to more pretrial incarceration of defendants who would otherwise be released.

Inefficient courts that waste judge and attorney time are always appropriate targets for reform, and modern technology offers some unambiguously attractive ways to improve efficiency. For example, document cameras can enable attorneys to organize and present exhibits electronically. Video monitors, digital projectors, and projection screens are in wide use, at least in federal courts, making it possible to easily use images to supplement more traditional verbal presentations. The push to allow remote witnesses to testify is both plausible and compelling in situations in which the witness is unavailable. A live videoconferenced procedure that permits real time testimony and cross-examination can provide a closer analog to live testimony than the use of a deposition transcript or even a video evidence deposition that lacks real time cross-examination. An expert witness, experienced with technology, may have

Reform in the Criminal Justice System, 14 LEGAL & CRIMINOLOGICAL PSYCH. 157 (2009). The shift from a live to a video image is likely to produce effects that are at least as substantial.

127 For compendia of current and potential uses of courtroom technology, see FEDERAL JUDICIAL CENTER, EFFECTIVE USE OF COURTROOM TECHNOLOGY: A JUDGE’S GUIDE TO PRETRIAL AND TRIAL (2001); NEAL FEIGENSON & CHRISTINA SPIESEL, LAW ON DISPLAY: THE DIGITAL TRANSFORMATION OF LEGAL PERSUASION AND JUDGMENT (2009).


129 Elizabeth C. Wiggins, What We Know and What We Need to Know About the Effects of Courtroom Technology, 12 WM. & MARY BILL RTS. J. 731, 733 (2004).

no difficulty participating remotely in a hearing. Yet when the government prepares to bring criminal charges against a defendant, the justice system must confront serious questions about the impact of technology on the defendant’s rights.\textsuperscript{131} The challenge is to avoid too swift an attraction to technology as a solution to perceived inefficiencies. Even outside the context of a trial or other proceeding that implicates the Confrontation Clause, the defendant can suffer a significant loss if the procedure involves more than a pro forma appearance. A bail hearing is in that category. It can result in a decision that deprives the accused of his liberty despite the presumption of innocence, and may interfere with his ability to effectively prepare a defense.\textsuperscript{132}

When the legal system is pressured by heavy caseloads and limited resources, quick fixes promised by new technology threaten to damage rather than promote justice. That is what appears to have happened in Cook County. Technology offers great promise, but procedural justice is the currency of a fair and legitimate court system. The needed approach is to conduct pilot programs that include an evaluation of the operation and impact of proposed reforms, rather than simply to impose dramatic system-wide changes, as Cook County did with the videoconferencing bail “reform.” As Judge Joseph Goodwin wisely observed in describing the use of video proceedings in federal criminal trials, the justice system must “carefully segregate those inefficiencies that are mere products of time and place—which we would be foolish to retain—from those that are deliberately built into our system to spare a free people the convenience of the guillotine.”\textsuperscript{133} The warning signs from the Cook County experience counsel caution.

\textsuperscript{131} For a list of potential threats to defendants’ rights, see supra text accompanying notes 58-61.


\textsuperscript{133} Ashdown & Menzel, supra note 53, at 68 (quoting Letter from Judge Joseph R. Goodwin, District Court Judge for the Southern District of West Virginia, to Judge Robin J. Cauthron, Chair, Defender Services Committee (Sept. 6, 2001)).