Defining Child Pornography: Law Enforcement Dilemmas in Investigations of Internet Child Pornography Possession¹

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This study examines law enforcement dilemmas in child pornography possession investigations in which no offender was arrested. A mail survey of US law enforcement agencies identified a sample of Internet child pornography possession cases where no arrest was made. Telephone surveys with law enforcement investigators were used to collect casespecific data and information on dilemmas in these investigations. Law enforcement investigators reported that determining whether or not images fit within statutory limits and ascertaining the age of children in images impacted arrest outcomes in child pornography possession cases.

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Introduction

Although child sex crimes have been a recognized social problem for more than two decades (Finkelhor, 1984), recent policy and media attention has focused on the commission of these crimes via the Internet. The emergence of Internet-facilitated sex crimes, including Internet child pornography possession, has raised crucial questions regarding the use of the Internet by offenders and the law enforcement challenges in addressing these offenses.

The problem of child pornography possession was thought to have been minimized prior to the emergence of the Internet. The availability of child pornography had declined due to legal actions and statutory revisions (Jenkins, 2001). However, there is a general consensus that the Internet has made child pornography more accessible and available to collectors and distributors (Biegel, 2001; Jenkins, 2001; Wolak, Mitchell, & Wells, 2002). Electronic child pornography can be obtained and traded on the World Wide Web, using Internet Relay Chat and via other online sources (Taylor, Quayle, & Holland, 2001). Online, child pornography possessors can download child pornography for collections and distribute images to other consumers.

Internet child pornography possession cases involve the use of the Internet or computer technology to possess and/or collect electronic images of child pornography. These investigations present challenges for law enforcement agents in the USA and around the world. This study explores law enforcement dilemmas related to defining child pornography in a sample of 34 Internet child pornography possession cases in which no offender was arrested. This study identifies specific dilemmas emerging in these investigations and presents recommendations related to these incidents.

Issues in Internet Child Pornography

This analysis examined law enforcement dilemmas related to *defining* child pornography in Internet crimes. Law enforcement agencies investigate these cases using traditional and undercover techniques and may encounter specific dilemmas related to the nature of these incidents. Additionally, there is considerable statutory variation among state and national definitions of child pornography and there can also be challenges related to establishing with certainty the ages of young people depicted in images. These issues can create obstacles for law enforcement.

What is Internet Child Pornography?

Within the USA, there is currently no uniform definition of child pornography, and therefore, significant variation exists among state statues. US federal law defines a

youth under the age of 18 as a 'child' and includes in its definition of child pornography photographs and films of conduct that are sexually explicit (Klain, Davies, & Hicks, 2001). Sexually explicit conduct may include sexual intercourse, bestiality, masturbation, and 'lascivious exhibition of the genitals or pubic area.' These federal definitions have been adopted by some states and interpreted broadly, such that it is difficult to identify one specific definition for child pornography.

Child pornography *possessors* may use child pornography to validate their sexual interest in children, to groom children and lower their inhibitions, or to blackmail victims or other offenders (Klain et al., 2001; Tyler & Stone, 1983). Others may be motivated to collect child pornography out of curiosity, for sexual arousal, or for other reasons.

As noted, this study examines law enforcement dilemmas in alleged Internet child pornography *possession* and does not include cases of child pornography production. Therefore, the cases classified here as Internet child pornography possession did not involve any online correspondence, exchange of images, or other Internet connection between an adult suspect and an identified juvenile victim. Law enforcement agents in this sample did not identify or contact any of the youth depicted in the child pornography images.

Law Enforcement Investigations of Internet Child Pornography

In the USA, law enforcement agencies arrested an estimated 1,713 offenders for Internet-related crimes that involved the possession of child pornography during the 12 months starting July 1, 2000 (Wolak, Mitchell, & Finkelhor, 2003). Wolak et al. found that 80% of these offenders possessed pornography depicting graphic sexual images and 83% possessed images depicting prepubescent children (2003).

The Internet has opened up new opportunities for investigation and evidence collection in child sex crimes. Computer technology can provide law enforcement agents with powerful weapons and forensic evidence often lacking in conventional child sex crimes (Norland & Bartholet, 2001). Since much of what takes place on the Internet leaves a digital trail, it is possible that this may actually facilitate police investigations of some child sex crimes, and allow law enforcement agencies with access to computer forensic equipment to collect valuable digital evidence.

Dilemmas in Investigating Internet Child Pornography Possession

Despite these emerging investigative practices, law enforcement investigations of Internet child pornography possession can also present specific investigative challenges. These cases may require digital evidence collection, undercover operations, and tailored interviewing practices (SEARCH, 2001). In addition, these cases may involve multiple law enforcement jurisdictions when child pornography is transmitted via the Internet. Due to the global reach of the Internet, an individual may possess child pornography images created or disseminated from anywhere in the world (Copine Project, 2003). There is a general consensus that global partnerships and international law enforcement collaboration are needed to effectively address online child pornography (International Centre for Missing & Exploited Children, 2002; 'International Cooperation to Tackle Child Pornography,' 2001).

The Internet has opened up new avenues of child pornography possession and law enforcement agencies have developed approaches that facilitate investigations and convictions in these crimes. However, investigations of Internet child pornography possession may pose some dilemmas and require specific resources. Computers may need to be purchased or upgraded for electronic communication, personnel are needed to work online, training in online investigations may be required, and specific digital technology is often useful in tracking suspects.

In cases where offenders are reported to possess images of child pornography on a computer, it is possible that images will have been deleted by the time law enforcement investigators examine the computer. Computer forensics experts with specific training may be able to locate files that have been deleted, and in most cases deleted information can be retrieved and used as evidence (Hardy & Kreston, 2002). Once images are located, investigators must be able to identify the age of victims in the photos, which may require expert testimony by medical experts.

Law enforcement agencies investigate Internet child pornography possession using both traditional and undercover investigations. Traditional methods could include responding to citizen reports and image discoveries. In undercover cases, law enforcement investigators may impersonate consumers interested in child pornography (Douglas, 2002) or take on the role of a child pornography collector interested in trading images, or infiltrating a child pornography bulletin board service.

A primary challenge is that law enforcement investigators must prove that images identified fit statutory definitions of child pornography. Wolak et al. found that 92% of offenders arrested for possessing child pornography had images of minors depicting explicit sexual activity or focusing on genitals (2003). Such images distinctly fit within most states' existing definitions of child pornography. However, some of the border-line Internet child pornography images identified in this study did not as clearly match state definitions.

Methodology

Research Design

The research project involves analysis of data collected as a component of the National Juvenile Online Victimization Study (N-JOV). N-JOV was sponsored by the National Center for Missing and Exploited Children and the United States Department of Justice. The primary objective of the N-JOV study was to capture incident estimates of Internet sex crimes against minors coming to the attention of law enforcement in a one-year timeframe. A secondary goal of N-JOV was to identify dilemmas in law enforcement investigations of these crimes. Please see the National Juvenile Online Victimization Study Methodology Report for a more detailed summary of N-JOV methodology (Wolak, Mitchell, & Finkelhor, 2004).

N-JOV collected detailed case information regarding Internet sex crimes against minors in which an arrest was made by a US law enforcement agency, as well as in cases in which no arrest was made by any US law enforcement agency. This study examines the cases where no offender was arrested. By definition, cases in this sample did not end in an arrest. Therefore, those cases may not have involved substantiated criminal activities or 'offenders' in a criminal sense. For convenience, these cases may be called 'crimes' instead of 'investigations' in this analysis and the term 'offender' may be used instead of 'suspect' in some analyses.

Data Collection and Procedures

This project used a two-phase data collection process. In Phase 1, a mail survey was sent to a national sample of county, state, and federal law enforcement agencies asking if they had investigated cases of Internet-related child pornography or sexual exploitation cases between July 1, 2000 and June 30, 2001. Agency directors or chiefs of police from the sample of law enforcement agencies were asked to provide case numbers and investigator names in arrest cases and cases where no offender was arrested. Cases without an arrest were defined as, 'Any *significant* (your agency invested considerable energy and resources) Internet-related child pornography or sexual exploitation case' in which no arrest was made 'because of technical, legal, evidentiary or other obstacles.'

In Phase 2 of the data collection process, interviewers conducted telephone interviews with law enforcement investigators about a sample of the cases reported in the mail survey. Three trained interviewers telephoned specified investigators at agencies with cases and collected data using a standardized instrument. Interviewers recorded answers on paper copies of the survey instrument and typed qualitative case summaries in Microsoft Word for each case.

Study Population and Sample

The Phase 1 mail survey was sent to a national sample of 2,574 law enforcement agencies. The initial stratified sample included three frames in order to collect information from agencies specializing in these crimes, those with training in these investigations, and from a random sample of all US law enforcement agencies (Table 1).

	Frame 1: Specialized agencies	Frame 2: Agencies with training	Frame 3: National sample of LEA	Total sample
Initial sample of law enforcement agencies	75	833	1,666	2,574
Agencies that responded	83%	93%	86%	88%
Final sample ^a	62	763	1,380	2,205

Table 1	Initial N-	JOV Study	y Sample of Law	Enforcement Agencies	(LEA)	
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^aSixty-five agencies were ineligible because they lacked jurisdiction to investigate Internet sex crimes against minors.

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The *first frame* consisted of 75 specialized agencies charged with investigating Internet sex crimes against minors, including 30 federally funded Internet Crimes Against Children (ICAC) Task Forces (one of the ICAC Task Forces included three agencies from three different states). Each agency was surveyed individually and the sample included 43 federally funded ICAC satellites that were in operation when the sample was developed. Eighty-three percent of the 75 ICAC Task Forces and satellite agencies completed and returned surveys.

The *second frame* consisted of 833 law enforcement agencies in which some staff attended training in Internet sex crimes against minors. Those trained agencies were randomly sampled from lists of agencies participating in training conducted by two training organizations, SEARCH and the National Center for Missing and Exploited Children. One additional agency in a large metropolitan area was added to the sample; this assured that agencies from all major metropolitan areas in the USA were included in the sample. Ninety-three percent of the eligible trained agencies returned mail surveys.

The *third frame* consisted of 1,666 other local, county, and state law enforcement agencies across the USA. This sample was drawn using a database available through the National Directory of Criminal Justice Data (National Directory of Law Enforcement Administrators, 2001). First and second frame agencies were cross-referenced with those in the third frame to avoid duplication in the final sample. Of the eligible third frame agencies, 86% completed and returned mail surveys.

Non-arrest Cases

The mail surveys included information about cases ending in arrest as well as cases where no arrest was made. These N-JOV mail surveys included 1,723 Internet sex crimes against minors cases ending in arrest and 200 Internet sex crimes against minors cases in which no offender was arrested. Approximately 70% of the 200 cases in the initial non-arrest sample screened out (n = 132) of the study. These screen outs were due to non-responses and refusals, duplicate or invalid cases, ineligible cases (i.e., an arrest did occur), and quota sampling to obtain a range of case types (Table 2). Particular emphasis was placed on obtaining a sample that included equal numbers of

Tabl	le 2	Responses to	Telephone	Interviews in	Cases No	t Ending in Arrest.
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Number of	Cases not ending in arrest	
Cases reported in mail surveys	200 (100%)	
Cases screened out		
• Non-responders and refusals	63 (31%)	
• Duplicate and invalid cases	11 (6%)	
• Cases not selected for sample	16 (8%)	
• Ineligible cases	42 (21%)	
NO ARREST interviews completed (% cases initially reported)	68 (34%)	
Internet child pornography cases	34	

non-arrest cases involving Internet child pornography and Internet sex crimes against identified juvenile victims. The final sample included 68 cases in which no arrest was made by any law enforcement agency. Thirty-four of those cases involved Internet child pornography.

Three trained interviewers conducted telephone interviews with law enforcement agents familiar with these non-arrest cases using a standardized instrument. Interviewers used specific sections of the instrument to collect data on case components, victim and offender characteristics, and law enforcement complications in these cases where no arrest was made. Interviewers recorded answers on paper copies of the survey instrument and typed qualitative case summaries in Microsoft Word for each case. Data collected from the telephone surveys and case summaries were examined for each of the 34 Internet child pornography cases in which no arrest was made.

Internet child pornography possession is defined here as involving the use of the Internet or computer technology to possess and/or collect electronic images of child pornography. Qualitative case summaries for these investigations were reviewed and coded for consistent themes to identify specific categories of dilemmas law enforcement agents encounter in investigating Internet child pornography cases. Key words and contextual information from the case summaries were coded and analyzed using NVIVO software. The dilemmas identified in these Internet child pornography cases were initially classified into four general types of challenges: (1) defining child pornography, (2) identifying offenders, (3) gaps in training and resources, and (4) complications arising from multi-jurisdictional investigations (Wells, Finkelhor, Wolak, & Mitchell, 2003). These categories were based loosely on law enforcement dilemmas identified in US Department of Justice literature (2000).

These categories are not mutually exclusive, since investigators may have noted multiple dilemmas related to one case. For instance, both definitions of child pornography and offender identification would be problematic if a case involved borderline images of child pornography found on a computer used by multiple individuals.

Results

Internet Child Pornography Possession Cases Where No Offender was Arrested

These 34 Internet child pornography possession cases include unsubstantiated allegations of child pornography possession, anonymous online posting of child pornography, borderline cases where children depicted in images may or may not be minors, and undercover investigations of suspected child pornography possessors.

The cases discussed here all contain an allegation or discovery of child pornography collected via the Internet. Based on information collected in the telephone survey, it may appear that many of the images identified here could meet existing definitions of child pornography. About 70% of the cases identified here included graphic sexual images and a similar percentage depicted nudity or semi-nudity. About 44% featured sexual contact between children and adults and close to half of the images showed penetration (whether or not they included an adult).

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However, all of these investigations share a primary similarity; law enforcement agencies were not able to make an arrest in any of these alleged crimes. There is no single explanation for why arrests did not occur in these cases and the dilemmas reported by law enforcement involve complex social and legal dynamics. Some of the dilemmas presented may be directly related to the nature of computer crime, and others could be problematic with or without an Internet-nexus.

Although these cases may have involved multiple challenges for law enforcement (Table 3), the current analysis will address problems related to defining child pornography. This analysis suggests that both evaluating the nature of child pornography images and ascertaining the age of children depicted in the images complicate this issue.

Evaluating the Nature of Child Pornography Images

The cases identified in this study illuminate divergent views regarding what constitutes child pornography. First, there may not be consensus regarding what types of images are graphic or explicit enough to fit existing definitions of child pornography. Second, it appears that images that depict prepubescent children are more likely to be considered child pornography than are those portraying older juveniles.

Determining whether or not images are explicit or graphic enough to meet the definition of child pornography is a primary dilemma for investigators (Lanning, 1992). That is because some images would consistently meet legal definitions of child pornography, and others may not. Consider the following case.

A Rent-A-Center contacted law enforcement when it repossessed a 40-year-old suspect's computer from his suburban home. The suspect lived alone, and when the Rent-A-Center staff took the computer, he told them 'Don't look on my hard drive.' They did, and found images of naked children. The law enforcement investigators found about 100 images of naked children, either at a nude beach or in a birch forest. The investigator believed that the images were a part of a series of images produced in Russia known to law enforcement. The investigator in this case described the images possessed by the suspect as 'Lolita art.' However, investigators were not able to prove that the suspect possessed any images that could be considered child pornography in his collection. Since images of naked children without graphic sexual activity or that do not focus on the genitals do not meet that state's definition of child pornography, the agency was unable to arrest the suspect.

Table 3 Primary Law Enforcement Dilemmas in Internet Child Pornogra	ohy Case	es.
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Law enforcement dilemma ^a	N (%)
Defining child pornography	16 (47%)
Identifying offenders	20 (59%)
Training and/or resources	12 (35%)
Collaboration with other agencies	4 (12%)

^aPercentages will not add to 100% due to overlapping categories.

An image that shows sexually explicit conduct between an adult and a child can clearly be considered child pornography, while images of nude children may be seen by some as artistic or erotic, but not child pornography (Lanning, 1992). Statutory definitions of child pornography vary by state, and it is probable that even within states, prosecutors may use some discretion in determining which images to accept as evidence.

Law enforcement agents stress that the intent of child pornography statutes is to criminalize the production or possession of graphic sexual images of children, not to penalize 'normal parents who simply have photographs of their nude, young children' (Lanning, 1992, p. 33). Generally, images of nude children would only be considered child pornography if they focus on the genital area or are otherwise considered to be lascivious exhibitions (Lanning, 1992). However, law enforcement agents are encouraged to consider borderline or questionable material in the context of an offender's entire collection or other incident dynamics (Lanning, 1992).

It is likely that law enforcement investigators proceed with caution in cases involving borderline images of juveniles or less than graphic images of alleged Internet child pornography. In another case, a computer repair shop found suspicious images on a suspect's computer.

A suspect dropped a computer off at a repair shop in another state. While fixing the computer, technicians found images that appeared to be child pornography. Law enforcement agents in both states reviewed the images and determined that they did not meet statutory requirements for child pornography. The images found were not graphic sexual images, but did feature child nudity and semi-nudity.

In the case above, the nature of the image was a major dilemma for investigators. None of the images found on the suspect's computer or posted on the Internet met the states' definitions of child pornography. Recent findings that most offenders arrested for Internet child pornography offenses possess images of explicit sexual acts (Wolak et al., 2003) and this case suggest that explicitness of images may be associated with arrest outcomes.

Determining the Age of Children Depicted in Child Pornography Images

In addition to image explicitness, law enforcement agents may face other definitional dilemmas. One such complication is determining the age of children depicted in child pornography images. Wolak et al. found that most of the Internet child pornography possessors arrested in the 12 months after July 1, 2000 had images of prepubescent children (2003). Although images of pubescent children fall within federal and most state statues, they may be less likely to lead to legal action. Lanning and Burgess (1989) note that adolescent victims of sex crimes generally elicit less sympathy than younger children.

Consideration of child's age can be particularly problematic in these child pornography possession cases, in which offenders collect images produced by others. Since investigators generally do not identify or contact the children depicted in the images, ascertaining their ages can present challenges. This was one of several dilemmas in a case involving a digital video. 278 M. Wells et al.

A suspect's ex-wife reported that her ex-husband had child pornography on a computer. Law enforcement agents searched the 46-year-old suspect's ISP account and were only able to find one video clip. The victims in the clip looked like minors to the law enforcement investigators, but the prosecutor declined to prosecute as the children 'looked to be 14, 15, or 16.' During this investigation, police discovered that the suspect was communicating online with a 13-year-old female in another country. The suspect had made this juvenile the beneficiary of his life insurance policy, and wrote 'I am absolutely in love with _____' in his Internet service provider profile. However, the victim in this case was never contacted by law enforcement, as there was no evidence that the two had ever met in person.

In this case, the law enforcement agent noted that although he was confident that children were minors, the prosecutor refused to move ahead with the case. From a practical standpoint, and as is suggested in the example above, law enforcement and/or prosecutors may not always be able to determine whether or not children in images fit statutory definitions. Some prosecutors may be hesitant to move ahead with cases in which the only images available depict older children, while others may give priority to these cases.

In some instances, prosecutors may be hesitant to arrest an offender if they anticipate problems proving that an image depicts minors. That was the dilemma in the following case.

A 25-year-old disabled male had been using a work laptop computer and a digital camera. The computer was given to another person, who ran into some problems and had a technician look at the laptop. The technician found what appeared to be child pornography stored in the laptop. The prosecutor in the case was concerned about proving that the children depicted in the images were minors. The law enforcement investigator in the case felt confident the images were of minors, and added that 'they didn't have any pubic hair.'

Prosecutors have legitimate legal concerns about proving the age of children depicted in images. Generally, 'children' in child pornography must fit within states' definitions of 'child,' and those ages and definitions vary within the USA. In Michigan, for example, 'a child means a person who is less than 18 years of age and is not emancipated by operation of law' (National Center for Prosecution of Child Abuse, 1999, p. 24). New Jersey's child pornography statute defines a child as 'any person under 16 years of age' (National Center for Prosecution of Child Abuse, 1999, p. 28).

Some jurisdictions use medical experts to testify that children depicted in images are minors (Rosenbloom & Tanner, 1998). The use of medical experts in child sexual exploitation cases is not a new phenomenon. Doctors, nurses, and other medical professionals can be called to testify regarding sexual abuse examinations and other medical procedures in child sex crimes (Holmgren, 2002).

If as some suggest, the number of pornographic images of children online is increasing (Jenkins, 2001), these two definitional dilemmas will likely continue to present challenges for law enforcement. Verifying whether or not images are graphic, explicit, or lascivious enough to fit within state statutes will be a primary difficulty. In addition, investigators and prosecutors will have to be able to ascertain that images depict minors.

Discussion and Recommendations

Recent research finds that the majority of offenders arrested for Internet child pornography possession have graphic sexual images and images depicting prepubescent victims (Wolak et al., 2003). However, this analysis suggests that some investigations reach an impasse if images identified do not fit existing statutes or if there is uncertainty regarding the age of children in images. These findings illustrate two dilemmas, the nature of child pornography images and the age of children depicted in the images, which can present challenges in law enforcement investigations of Internet child pornography possession.

Limitations

Several limitations of this study may affect the validity or the generalizability of these results. First, the sample of Internet child pornography possession cases where no arrest was made is small and was selected using quota sampling. Although the law enforcement agencies initially contacted for this study were selected randomly, it is possible that interviews completed in this project do not represent a random sample of all Internet child pornography cases in which no offender was arrested. Second, cases where no arrest was made may have been difficult for law enforcement agents to remember. This may have impacted the initial size of the sample, as well as the information collected from investigators. In some jurisdictions, no written information is maintained if there is not an arrest, and therefore, investigators based their responses on memory alone. Third, the nature of Internet child pornography crimes and law enforcement investigations are changing rapidly. Training, advances in forensic capabilities, and novel criminal approaches may mean that these dilemmas are obsolete and others have taken precedence. However, the cases described here were identified using a random sample of US law enforcement agencies and make a substantial contribution to current knowledge.

Recommendations Related to Defining Child Pornography

This analysis suggests three primary recommendations. First, investigators charged with ascertaining whether or not to proceed in an Internet child pornography case would benefit from a formal infrastructure to support child pornography investigations. Given the number of child pornography images thought to be replicated and shared online (Lemmey & Tice, 2000), it is probable that law enforcement agencies have already determined that some images can be defined as child pornography. Hames (1994) states that the lack of a centralized Internet child pornography database in the USA has led to a situation with 'literally thousands of images of children in abusive situations stored away in police files,' with no possibility for further action or identification (p. 203).

Law enforcement agencies in European countries have cataloged known images of child pornography (Persson, 2001) and the USA has begun to compile such a database

(Caruso, 2003). Since it is generally believed that many of the images in these investigations are passed among child pornography consumers or are 'known' to law enforcement agents, such databases could minimize wasted resources if several agencies identify the same image. Similarly, global law enforcement collaborations may increasingly utilize these databases to facilitate cross-national investigations.

Second, as an adjunct to such a database, additional consideration should be given to the use of expert witness testimony in child pornography cases. Currently, some law enforcement agencies use expert witness testimony to support allegations that an image meets definitions of child pornography. Such witnesses may testify as to the age of children depicted in images, the nature of sexual acts, or other issues. Once experts confirm that images meet definitions of child pornography in one jurisdiction, they could be submitted to the centralized database. Such expert witness testimony may not be financially feasible for some smaller law enforcement agencies. Therefore, federal resources could be allocated for expert witness assistance, realizing that images determined to be child pornography by smaller agencies could be entered into the national database and possibly be used as supporting evidence in subsequent investigations in other jurisdictions.

Third, the law enforcement investigations described here all occurred in the 12 months between July 1, 2000 and June 30, 2001. Therefore, these investigations occurred prior to a landmark 2002 case in which the US Supreme Court ruled that 'virtual' child pornography could not be considered criminal (Brown, 2002). This Supreme Court decision ruled that virtual child pornography created entirely using computer graphics, with no actual children, is protected under the First Amendment (Brown, 2002). The ruling in this case, *Ashcroft v. the Free Speech*, stated that 'virtual' images of child pornography were a 'legal and logical alternative to actual child pornography' (Brown, 2002, p. 1).

This ruling had major implications for law enforcement and prosecutors, who are responsible for proving that children in child pornography images are 'real.' With advances in computer technology, discerning which images are real and which are 'virtual' may be increasingly difficult for police and prosecutors (Taylor, 2001). Although this ruling is still under debate (McCullagh, 2003), it has likely presented significant dilemmas for law enforcement agencies charged with defining Internet child pornography.

Conclusion

This study identifies specific challenges law enforcement agents may encounter in investigations of Internet child pornography possession. Defining child pornography can be complicated by definitional challenges and identifying the age of children depicted in images. While this analysis examined a sample of cases known to US law enforcement agents, child pornography crimes may involve multiple jurisdictions and cross national borders. Therefore, this analysis suggests at least three implications for policy and law enforcement practice. First, there is a need for a more formal national and global infrastructure to support these investigations. Second, law enforcement

agencies need additional resources, specifically allocated for assisting in expert witness or other assistance in ascertaining if images depict minor children. Finally, this analysis suggests that while law enforcement investigators report using innovative, technology-enhanced investigation strategies, the nature of the Internet appears to present significant challenges for law enforcement. Continued analysis of the impact of the Internet on both the commission and investigation of child pornography crimes is essential.

Note

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