

DRAWING THE LINE ON VIRTUAL CHILD PORNOGRAPHY: BRINGING THE LAW IN LINE WITH THE RESEARCH EVIDENCE*

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I.

INTRODUCTION

In 1996, Congress passed the Child Pornography Prevention Act (“CPPA”) to provide broader protection against sexual exploitation of children.¹ Adding to extant prohibitions against the use of live children in child pornography, the CPPA criminalized “any visual depiction, including any photograph, film, video, picture, or computer or computer-generated image or picture” that “is, or appears to be, of a minor engaging in sexually explicit conduct”² Thus, the provisions of the CPPA prohibited pornographic images in which the actors could be taken for minors, as well as computer-generated or virtual child pornography.³ For the first time the new legislation also reached items “advertised,

1. Child Pornography Prevention Act of 1996 [CPPA], Pub. L. No. 104-208 § 121, 110 Stat. 3009-26 (1996) (codified as amended in scattered sections of 18 U.S.C.), *invalidated in part by Ashcroft v. Free Speech Coalition*, 535 U.S. 234 (2002).

2. CPPA § 121(2).

3. Ashcroft, 535 U.S. at 241. Virtual child pornography includes digital, computer, or computer-generated images, whether made by electronic, mechanical, or other means. *See id.* For a discussion of techniques for creating virtual child pornography, see Rikki Solowey, *A Question of Equivalence: Expanding the Definition of Child Pornography to Encompass “Virtual”*

promoted, presented, described, or distributed in such a manner that conveys the impression that the material is or contains a visual depiction of a minor engaging in sexually explicit conduct.”⁴ While enjoying unquestioned popular support, the constitutionality of the CPPA quickly proved suspect, making the new law a lightning rod for litigation. The CPPA withstood some early legal attacks, prevailing over challenges in four of five circuit courts from 1999 to 2001.⁵ Upon reaching the U.S. Supreme Court, however, the act was ruled unconstitutional in *Ashcroft v. Free Speech Coalition* in April of 2002.⁶

Wary of the overbroad character of key statutory language, the Court in *Ashcroft* foresaw the CPPA capturing in its prohibitory mesh a substantial amount of constitutionally protected speech. For example, the Court took issue with the banning of material that merely “conveys the impression” that it contains depictions of actual children (e.g., material salaciously marketed as child pornography), whether or not it actually consisted of child pornography.⁷ The Court also found fault with the CPPA’s injunction against real and virtual pornographic images that “appear to be” of minors engaging in sexually explicit conduct.⁸ Justice Anthony Kennedy’s majority opinion decried “the wide sweep of the statute’s prohibitions” as capable of reaching Academy Award-winning films such as *Traffic* and *American Beauty*, Shakespearean adaptations, and textbook pictures, among other materials.⁹ Justice Sandra Day O’Connor, concurring in the judgment in part, expressed alarm that the statute criminalized other sexually suggestive but constitutionally unobjectionable items, including sexually evocative cartoons or statues.¹⁰ Highlighting overbreadth concerns, the Court additionally noted that the CPPA prohibited speech “that records no crime and creates no victims by its production.”¹¹ Whereas speech and harm are inexorably intertwined in the case of child pornography that uses actual children—justifying child pornography’s blanket illegality—the causal link with virtual child pornography is instead “contingent and indirect,” depending upon “some unquantified potential” for subsequent harm.¹² Although the government had advanced the argument that virtual child pornography whets the sexual

Computer-Generated Images, 4 TUL. J. TECH. & INTELL. PROP. 161 (2002).

4. CPPA § 121(2).

5. *United States v. Hilton*, 167 F.3d 61 (1st Cir. 1999) (upholding the CPPA); *United States v. Acheson*, 195 F.3d 645 (11th Cir. 1999) (same); *United States v. Mento*, 231 F.3d 912 (4th Cir. 2000) (same); *United States v. Fox*, 248 F.3d 394 (5th Cir. 2001) (same). The CPPA was held invalid in the Ninth Circuit. *Free Speech Coalition v. Reno*, 198 F.3d 1083 (9th Cir. 1999), *aff’d sub nom. Ashcroft v. Free Speech Coalition*, 535 U.S. 234 (2002).

6. *Ashcroft*, 535 U.S. at 250.

7. *Id.* at 257–58 (discussing then-current 18 U.S.C. § 2256(8)(D)).

8. *Id.* at 256 (discussing then-current 18 U.S.C. § 2256(8)(B)).

9. *Id.* at 247–48.

10. *Id.* at 264 (O’Connor, J., concurring in judgment in part and dissenting in part).

11. *Id.* at 236.

12. *Id.*

appetites of pedophiles, thereby prompting abuse of real children,¹³ the Court held that the evidentiary record failed to establish a cognizable risk of abuse.¹⁴ Nor was the Court convinced by the government's complementary argument that pedophiles could use virtual child pornography to groom children for abuse. Accordingly, the Court held the government's evidence insufficient to prove a real risk of pedophiles' showing virtual depictions of naked children or adult-child sex to potential victims in order to lower children's inhibitions.¹⁵ Justice Kennedy concluded, "Without [establishing] a significantly stronger, more direct connection, the Government may not prohibit speech on the ground that it may encourage pedophiles to engage in illegal conduct."¹⁶

This article begins to respond to Justice Kennedy's challenge: by probing the most recent research, we attempt to determine whether the evidentiary record is sufficient to establish a legally cognizable link between the use of various types of pornography and child molestation. Our goal is not to consider the weight of the evidentiary record confronting the Court in *Ashcroft*; rather, we consider a much wider sphere of evidence. In doing so, we do not begin with a particular position for which we try to marshal the best support, but instead we consider a wide range of relevant research and consider what policies are best supported by such research evidence. We are aware that policy decisions are often not exclusively based on research evidence and in fact may often be made despite potentially relevant research, on the basis of other considerations. In this article we do not consider such other considerations but exclusively focus on the relevant research evidence that might help inform legal and other public policies. We seek to pinpoint, using the scientific literature, for whom and to what degree virtual child pornography constitutes a valid risk factor for the commission of sexually abusive acts.

As an initial matter, it is necessary to consider the implications of *Ashcroft* and, specifically, the Court's disregard for the government's contention that virtual child pornography can lead to actual instances of abuse.¹⁷ Traditionally, the Court has granted much deference to the evidentiary findings of Congress, the traditional wisdom being that Congress, as a legislative entity, is "far better

13. *Id.* at 250-51.

14. *Id.*

15. *Id.*

16. *Id.* at 253-54. Justice Kennedy's opinion of the Court was not without its detractors. Chief Justice Rehnquist and Justice O'Connor authored separate opinions, Rehnquist dissenting and O'Connor dissenting in part; Justice Scalia joined in part in each of their opinions. Justice Thomas wrote a separate concurrence reserving the right to revisit the case if and when virtual technology advances to a point where it begins to emasculate governmental faculty to prosecute sexual offenders. *Id.* at 259 (Thomas, J., concurring in judgment). Such a scenario would arise if the prospect of lifelike virtual images' having been used in a particular case precludes proof that an actual child has been harmed. That is, if the technology progresses to the point that reasonable people cannot distinguish between virtual and actual images, the government would not be able to prove beyond a reasonable doubt that an actual child has been harmed.

17. See *Ashcroft*, 535 U.S. at 250-51.

equipped than the judiciary” to perform a fact-finding role.¹⁸ As the Court has stated:

Even in the realm of First Amendment questions where Congress must base its conclusions upon substantial evidence, deference must be accorded to its findings as to the harm to be avoided and the remedial measures adopted for that end, lest we infringe on traditional legislative authority to make predictive judgments when enacting nationwide regulatory policy.¹⁹

It is notable, however, that in *Ashcroft* that the government mustered a conspicuous lack of published scientific evidence to back its predictive judgment. Although various clinicians and government agents had given supportive testimony during a Congressional committee hearing on the subject, their testimony had drawn in the main from practical experience with child molesters and not from peer-reviewed, empirically validated research science.²⁰ As indicated in the amicus brief of the American Civil Liberties Union, et al., even the small body of supportive literature that the government presented for the Court’s consideration had been authored “by and large not [by] scientific researchers but law enforcement officers or anti-pornography advocates. And the conclusory quotations excerpted in the government’s citations do not cite any research or study on which they could be validly based.”²¹ Thus *Ashcroft* did little to resolve the threshold legal question; by any standard the evidence was simply insufficient to prove that virtual child pornography can lead to child abuse. Be that as it may, there are several possible interpretations of *Ashcroft*. One could read the case as standing categorically for the proposition that deeds alone and not indeterminate proclivities may be constitutionally proscribed, thus obviating the need to look more definitively for evidence of a causal connection. To wit, Justice Kennedy’s opinion noted that “[t]he normal method of deterring unlawful conduct is to impose an appropriate punishment on the person who engages in it.”²² An alternative interpretation would be to apply incitement doctrine to the context of virtual child pornography.²³ Incitement doctrine holds that speech advocating a violation of law or use of force can be constitutionally proscribed only if it “is directed to inciting or producing imminent lawless action

18. *Turner Broad. Sys., Inc. v. FCC*, 520 U.S. 180, 195 (1997).

19. *Id.* at 196.

20. For example, one psychiatrist questioned and cited by Congress testified, based on his own clinical experience, that “the overwhelming majority [of pedophiles] . . . use child pornography and/or create it to stimulate and whet their sexual appetites which they masturbate to, then later use as a model for their own sexual acting-out with children.” *Child Pornography Prevention Act of 1995: Hearing Before the Senate Comm. on the Judiciary*, 104th Cong., 2d Sess. 35 (1996) (testimony of Dr. Victor Cline). See also S. REP. NO. 104-358 at 16–17 (1996) (reporting synopsis of Dr. Cline’s anecdotal evidence before Congress).

21. Brief of the ACLU, et al., as Amici Curiae, in Support of Respondents at 24, *Ashcroft*, 535 U.S. 234 (2002) (No. 00-795). See also *supra* note 20.

22. *Ashcroft*, 535 U.S. at 253 (quoting *Bartnicki v. Vopper*, 532 U.S. 514, 529 (2001)).

23. See *Brandenburg v. Ohio*, 395 U.S. 444, 447 (1969).

and is likely to incite or produce such action.”²⁴ In point of fact, Justice Kennedy cited the incitement doctrine in his opinion, observing by contrast, “There is here no attempt, incitement, solicitation, or conspiracy.”²⁵

Despite some superficial support, both of the foregoing interpretations likely misconstrue Justice Kennedy’s opinion. For one, rather than explicitly endorsing an incitement standard in *Ashcroft*, Justice Kennedy instead pronounced that the government had shown “no more than a remote connection between speech that might encourage thoughts or impulses and any resulting child abuse.”²⁶ Kennedy would require the government to plainly establish “a significantly stronger, more direct connection” before it could proscribe virtual child pornography.²⁷

Second, and as discussed further below, courts have consistently permitted the government unique allowance to restrict the rights of convicted or alleged sex offenders on the basis of propensity evidence.²⁸ Thus, we might expect that the propensity argument made in *Ashcroft* (i.e., that virtual child pornography leads to actual instances of abuse) would likewise command a slightly wider range of acceptable operation than usual.

Third, the “surpassing importance”²⁹ of the government’s interest in preventing sexual abuse and exploitation of children has spawned unique rules. This is evident in the complete bar on child pornography,³⁰ as compared with the greater constitutional allowance permitted obscenity in general, private possession of which remains lawful.³¹ Thus it is not clear that First Amendment access rights to virtual child pornography should be looked upon as would a usual First Amendment claim.

Finally, to read *Ashcroft* as holding that virtual child pornography warrants treatment equivalent to “normal” speech would be to pay no heed of the Court’s ostensible historical approach regarding First Amendment speech, in which indecent speech has arguably long been seen to occupy a lower rung of constitutional protection. As the Court indicated many years ago:

24. *Id.*

25. *Ashcroft*, 535 U.S. at 253.

26. *Id.*

27. *Id.*

28. *See, e.g.*, *United States v. Castillo*, 140 F.3d 874, 881 (10th Cir. 1998) (holding that admission of evidence of defendant’s other acts of child molestation does not violate Due Process Clause, Equal Protection Clause, or Eighth Amendment); *Doe v. City of Lafayette*, 377 F.3d 757 (7th Cir. 2004) (upholding ban of convicted sex offender from public parks). *See also* Elizabeth Cloud, *CONSTITUTIONAL LAW—First Amendment and Freedom of Thought—Banishing Sex Offenders: Seventh Circuit Upholds Sex Offender’s Ban from Public Parks after Thinking Obscene Thoughts about Children*. *Doe v. City of Lafayette*, 377 F.3d 757 (7th Cir. 2004), 28 U. ARK. LITTLE ROCK L. REV. 119, 127–31 (2005).

29. *New York v. Ferber*, 458 U.S. 747, 756 (1982).

30. *See Osborne v. Ohio*, 495 U.S. 103 (1990) (upholding conviction under a state law completely banning the possession of pornographic materials depicting minors).

31. *See Stanley v. Georgia*, 394 U.S. 557, 568 (1969).

There are certain well-defined and narrowly limited classes of speech, the prevention and punishment of which have never been thought to raise any Constitutional problem. These include the lewd and obscene It has been well observed that such utterances are no essential part of any exposition of ideas, and are of such slight social value as a step to truth that any benefit that may be derived from them is clearly outweighed by the social interest in order and morality.³²

Such a standards-based constitutional calculus has been chronicled more recently by Justice Stevens:

[T]he scope of protection provided expressive activity depends in part upon its content and character. We have long recognized that when government regulates political speech or “the expression of editorial opinion on matters of public importance,” “First Amendment protectio[n] is ‘at its zenith.’” In comparison, we have recognized that “commercial speech receives a limited form of First Amendment protection,” and that “society’s interest in protecting [sexually explicit films] is of a wholly different, and lesser, magnitude than [its] interest in untrammelled political debate”³³

Ultimately, we believe that *Ashcroft*, and Justice Kennedy’s remarks regarding the strength of the connection between pornography use and subsequent abuse in particular, might properly be viewed as a clarion call for further empirical investigation into the likely consequences dictated by pedophilic consumption of virtual child pornography. Our article revisits the empirical question of whether, and to what extent, virtual pornography stirs pedophilic tendencies to commit child sexual abuse, or “whets the appetites” of pedophiles. It is germane to revisit this question for two main reasons: (1) Congress has since *Ashcroft* demonstrated a willingness to address the overbreadth concern at issue in the case in crafting the Prosecutorial Remedies and Other Tools to End the Exploitation of Children Today Act of 2003 (“PROTECT”),³⁴ and (2) the

32. *Chaplinsky v. New Hampshire*, 315 U.S. 568, 571–72 (1942) (footnotes omitted).

33. *R.A.V. v. City of St. Paul*, 505 U.S. 377, 429 (1992) (Stevens, J., concurring in judgment) (citations omitted; second and third brackets in original). See also *Young v. American Mini Theatres*, 427 U.S. 50, 70 (1976) (Stevens, J., plurality opinion) (quipping that “few of us would march our sons and daughters off to war to preserve the citizen’s right to see ‘Specified Sexual Activities’ exhibited in the theaters of our choice.”). A standards-based approach to indecent speech gained majority acceptance in *New York v. Ferber*, where non-obscene but sexually explicit depictions of actual children were adjudged illegal by dint of the “exceedingly modest, if not de minimis” value of the speech. *New York v. Ferber*, 458 U.S. 747, 762 (1982). By contrast, Justice Kennedy’s opinion in *Ashcroft* plainly declines to endorse this line of reasoning. *Ashcroft v. Free Speech Coalition*, 535 U.S. 234, 250–51. For a review of the Court’s multi-faceted approach to First Amendment speech, see William R. Huhn, *Assessing the Constitutionality of Laws That are Both Content-Based and Content-Neutral: The Emerging Constitutional Calculus*, 79 IND. L.J. 801 (2004).

34. PROTECT Act, Pub. L. No. 108-21, 117 Stat. 650 (2003) (codified as amended in scattered sections of 18 U.S.C., 28 U.S.C., and 42 U.S.C.). See also *On Introduction of the Hatch-*

empirical literature with regard to effects of child pornography consumption has matured in the interim.

There are a number of key assumptions that ground our consideration of the relevant evidence:

(1) Even if the evidence does not support a direct, simple connection between pornography use and abusive acts, the Court is likely to be influenced by evidence showing that the use of certain types of pornography constitutes a risk factor increasing the likelihood of certain molesters' committing sexually abusive acts against children. The Court's discussion in *Ashcroft* provided rather mixed signals regarding this issue, but Justice Kennedy's opinion suggested that a stronger body of research evidence could sway the Court to extend restrictions on virtual child pornography.

(2) Data regarding live child pornography are applicable to virtual child pornography as well. We are not aware of any current research that specifically examines the use or effects of virtual child pornography. However, since the government presently contends that it seeks to target only virtual child pornography that is indistinguishable to the consumer from child pornography that uses real children³⁵ and further contends that the technology to create such pornography is readily available,³⁶ this assumption seems quite reasonable.³⁷ Therefore, whenever we refer to the research on child pornography, we are assuming that similar associations would be found with virtual child pornography.

Leahy Prosecutorial Remedies and Tools Against the Exploitation of Children Today ("PROTECT") Act of 2002 (May 15, 2002) (statement of Senator Patrick Leahy, Chairman, Senate Judiciary Committee) (detailing how the PROTECT Act addresses the overbreadth concern expressed in *Ashcroft*), available at <http://leahy.senate.gov/press/200205/051502a.html>. The PROTECT Act seeks to ban images that are of, or are "indistinguishable from," a minor engaging in sexually explicit conduct. 18 U.S.C. § 2256(8)(B).

35. See *Ashcroft*, 535 U.S. at 249.

36. See PROTECT Act § 501(5), 117 Stat. at 677 (Congressional findings) (finding that "new photographic and computer [imaging] technologies make it possible to produce . . . visual depictions of what appear to be children engaging in sexually explicit conduct that are virtually indistinguishable to the unsuspecting viewer from unretouched photographic images of actual children engaging in sexually explicit conduct.").

37. Nevertheless, research currently underway is designed to test aspects of this assumption by using adult pornography that is either virtual or real to examine whether identical reactions occur to each stimulus. There is also research suggesting that individuals may react in the same way to "virtual immersion," which uses visual portrayals that mimic real cues to a high degree. More specifically, using a similar paradigm to the one used by Stanley Milgram in a series of studies in the 1960s on obedience, researchers studied participants' behavior (including physiological reactions) in a replication of the famous Milgram studies. In Milgram's experiment, ostensibly about the effects of punishment on learning, participants were led to believe that they were giving electric shocks to an unseen confederate learner; in the replication study, participants were required to give electric shocks to a virtual human. The researchers found the same responses as in the original study at the subjective, behavioral, and physiological levels, even though participants knew that no real events (including the infliction of actual suffering) were occurring. Mel Slater, Angus Antley, Adam Davison, David Swapp, Christoph Guger, Chris Barker, Nancy Pistrang & Maria V. Sanchez-Vives, *A Virtual Reprise of the Stanley Milgram Obedience Experiments*, PLoS ONE 1(1): e39 (2006), available at <http://www.pubmedcentral.nih.gov/articlerender.fcgi?artid=1762398>.

(3) Data regarding adult pornography may, under some circumstances, help inform conclusions regarding child pornography. Below we present a discussion of the generalizability of research findings, to provide a framework for understanding such an assumption.

(4) If sufficient evidence indicates that the use of virtual child pornography may be a risk factor contributing to a greater likelihood in some individuals of committing sexually abusive acts, then a legal response is likely to reduce such increased risk. In this article, we do not address this question specifically; nor do we consider related questions about how effectively a legal response may be enforced.

In Part II we begin by reviewing the legal landscape surrounding *Ashcroft*, thus placing it in the appropriate historical context. Granted, in crafting the CPPA, legislators apparently overestimated the “greater leeway”³⁸ traditionally accorded government with respect to child pornography over other laws that conflict with First Amendment protections, leading to the act’s demise. It is nonetheless apparent that legislators have considerable flexibility to establish laws designed to curtail indeterminate risks of child sexual abuse, including risks emanating from whetting pedophilic appetites. This has proved true for a recent spate of laws aimed at preempting recidivist tendencies of previously convicted child sex offenders.

In Part III we critically review psychological evidence regarding the strength of the connection between viewing child pornography and committing subsequent acts of abuse, or whether child pornography can reasonably be seen to “whet the appetites” of potential child molesters.³⁹ Although experimental research is by necessity limited with respect to whether consuming child pornography encourages acts of abuse, one factor that shows promise in diagnosing likelihood of offending is the interplay of use of child pornography with evidence of prior sex offenses.

In Part IV we refer to a related literature that has investigated effects of adult pornography on sexually aggressive behaviors. When it comes to the potential impact on antisocial behavior most relevant to the present article, this literature emphasizes what we have labeled “tipping point” effects, in which pornography consumption in the context of other risk factors (e.g., a history of aggressive behaviors, relatively high hostile masculinity, or an impersonal orientation towards sex) increases the risk of offending behaviors. By analogy, we suggest the likelihood of similar “tipping point” effects pertaining to the availability of child pornography.

38. *New York v. Ferber*, 458 U.S. 747, 756 (1982).

39. The term “whet the appetite,” which has been used in the context of the Supreme Court’s and other legal deliberations, *see, e.g., Ashcroft*, 535 U.S. at 241, 263–64, is interpreted here to mean increasing the risk of child molestation, as examined in the context of a confluence of other risk factors. We believe that such an interpretation is reasonable because the term “whet the appetite” appears to recognize that an “appetite” already exists to some degree but that consuming virtual child pornography might add further “fuel to the fire.”

In Part V we build on Parts III and IV to suggest a new, more-discriminating approach to virtual child pornography that would subject convicted sex offenders, but not others, to criminal penalties for the mere possession of virtual child pornography. If and when the Court re-examines the relation between virtual child pornography and subsequent pedophilic offenses, it may wish to do so in light of a constitutional framework predicated upon a “tipping point” model of demonstrable risk relations.

II.

THE LEGAL LANDSCAPE SURROUNDING *ASHCROFT V. FREE SPEECH COALITION*

A. *Congress responds: the Prosecutorial Remedies and Other Tools to End the Exploitation of Children Today Act (PROTECT)*

In the aftermath of the Court’s decision in *Ashcroft*, Congress, undeterred, continued to build its case against the perceived evils of child pornography. Illustratively, in testimony recorded before the House Subcommittee on Crime, Terrorism, and Homeland Security in May of 2002, the Unit Chief for the FBI’s Crimes Against Children Unit testified in relevant part:

[W]hen used by individuals who have a predisposed sexual interest in children, child pornography can sexually arouse them, fuel their sexual fantasies about children, validate their sexual attraction to children [e.g., because trade in child pornography situates individual consumers within a network of like-minded people], and help them rationalize this behavior. All of these behaviors increase the risk that these individuals will act out their fantasies by sexually molesting children. Our practical experience [e.g., interviews with child sex offenders] confirms these findings.⁴⁰

Prompted by these concerns, as well as by looming concerns with the government’s ability to successfully prosecute child pornography cases absent an outlawing of virtual child pornography, Congress responded quickly to *Ashcroft* by passing the PROTECT Act of 2003.⁴¹ The PROTECT Act replaced the

40. *Threats Against the Protection of Children: Hearing Before the Subcomm. on Crime, Terrorism and Homeland Security of the H. Comm. on the Judiciary*, 107th Cong. (May 1, 2002) (testimony of Michael J. Heimbach, Criminal Investigative Div., Crimes Against Children Unit, FBI), available at 2002 WL 844877.

41. PROTECT Act, Pub. L. No. 108-21, 117 Stat. 650 (2003) (codified as amended in scattered sections of 18 U.S.C., 28 U.S.C., and 42 U.S.C.). Congress in passing the PROTECT Act was also notably concerned with practical enforcement difficulties in child pornography cases occurring on the heels of *Ashcroft*. *Id.* § 501(7)–(10), 117 Stat. 650, 677. As presaged by Justice Thomas’s concurrence in *Ashcroft*, 535 U.S. at 259–60, Congressional findings accompanying the PROTECT Act lament the chilling effect on prosecutors of a new “virtual child pornography defense,” whereby the defense can claim that images alleged to depict real children are actually constitutionally protected computer-generated reproductions. PROTECT Act § 501(7)–(10). In its accompanying findings Congress further contends that absent a change in the law post-*Ashcroft*,

former “appears to be” language of the CPPA, thereby revising the definition of child pornography. The PROTECT Act sought to ban a narrower class of imagery “that is, or is indistinguishable from, that of a minor engaging in sexually explicit conduct”⁴²

The PROTECT Act was clearly constructed to heed the lessons of *Ashcroft*. To leave no doubt as to the Act’s intent to reach a narrower category of speech, Congress noted in the statute that “indistinguishable” was defined “such that an ordinary person viewing the depiction would conclude that the depiction is of an actual minor engaged in sexually explicit conduct.”⁴³ Tracking the stated concerns of Justice O’Connor in particular,⁴⁴ Congress added that this definition excludes “depictions that are drawings, cartoons, sculptures, or paintings depicting minors or adults.”⁴⁵

Justice O’Connor, it should be noted, had advocated that the CPPA be given a limiting instruction to allay overbreadth concerns, such that imagery that “appears to be . . . of a minor” according to the language of the statute be interpreted to encompass only those images that are “virtually indistinguishable from” a minor.⁴⁶ Reading in such limits, Justice O’Connor would have found the ban on virtual child pornography at issue in *Ashcroft* to survive strict scrutiny.⁴⁷ Chief Justice Rehnquist, too, had advocated a limiting instruction so as to uphold the CPPA’s constitutionality, declaring, “Other than computer-generated images that are virtually indistinguishable from real children engaged

any chilling of prosecutions will continue to grow worse with continuing technological advancements in digital imaging, which can only serve to increase difficulties in verifying that particular images depict a real child. *Id.* § 501(10)–(15).

42. 18 U.S.C. § 2256(8)(B). As one commentator explains, “Although ‘indistinguishable from’ supposes that one cannot perceive a difference, ‘appears to be’ suggests that one can, only need not.” James N. Kornegay, *Protecting our Children and the Constitution: An Analysis of the “Virtual” Child Pornography Provisions of the PROTECT Act of 2003*, 47 WM. & MARY L. REV. 2129, 2150–51 (2006).

43. 18 U.S.C. § 2256(11). The PROTECT Act also includes an affirmative defense that may be asserted in cases where “(1)(A) the alleged child pornography was produced using an actual person or persons engaging in sexually explicit conduct; and (B) each such person was an adult at the time the material was produced; or (2) the alleged child pornography was not produced using any actual minor or minors.” 18 U.S.C. § 2252A(c) (West, Supp. 2005). Theoretically, then, a charged defendant could avoid conviction under the PROTECT Act if able to produce exculpatory evidence documenting no harm to actual children. As a descriptive matter, this is likely to be a challenging burden to meet for many in the event of computer-generated pornography virtually “indistinguishable from” actual pornography.

44. See *Ashcroft*, 535 U.S. at 264 (O’Connor, J., concurring in judgment in part and dissenting in part) (acknowledging that the language of the CPPA could be interpreted to include “even cartoon-sketches or statues of children that were sexually suggestive”).

45. 18 U.S.C. § 2256(11).

46. *Ashcroft*, 535 U.S. at 264 (O’Connor, J., concurring in judgment in part and dissenting in part).

47. *Id.* In the same opinion, however, Justice O’Connor excepts youthful-adult pornography, made using adults who appear to be minors. *Id.* at 266–67 (holding that even a limiting instruction would not save a ban on pornographic depictions that “appear to be . . . of a minor” if such a ban were applied to youthful-adult pornography.).

in sexually explicit conduct, the CPPA can be limited so as not to reach any material that was not already unprotected before the CPPA.”⁴⁸ Chief Justice Rehnquist would have interpreted the CPPA to reach only “the hard core of child pornography.”⁴⁹

B. Conventional treatment of propensity evidence and the exception to the rule in child sex-offense cases: the example of character evidence

As a general rule, a person’s supposed predilection to commit criminal acts is of limited evidentiary value to a legal system predicated on libertarian notions of free will and moral responsibility. The Court in *Ashcroft*, in accordance with this theory, refused to credit Congressional testimony that child pornography *can* lead to abuse as sufficient proof to justify the CPPA’s ban on virtual child pornography.⁵⁰ *Ashcroft*, however, did not concern exposure effects of pornography on convicted sex offenders per se. Where convicted sex offenders are involved, legislative determinations of causal risk relations have been granted unique and relatively wide latitude for their actionable operation.

The Federal Rules of Evidence (“FRE”) typify this evidentiary double standard between how propensity evidence bears on sex offenses versus other criminal domains. Rule 404(b) prohibits admission of “character” evidence, including evidence of other crimes, wrongs, or acts, designed to prove one’s propensity to commit a crime in a particular instance.⁵¹ In spite of this general dictate, the Federal Rules create an exception in child sex-offense cases,⁵² reflecting many states’ historical “lustful disposition” exception to the common-law rule.⁵³ This exception in sex-offense cases effectively allowed evidence of a defendant’s prior sexual history to prove disposition toward committing the charged sexual act.⁵⁴ As one state supreme court declared approximately 150 years ago:

The general rule in criminal cases is well settled, that the commission of other, though similar offenses, by the defendant, can not be proved for the purpose of showing that he was more likely to have committed the offense for which he is on trial But the courts in several of the states have shown a disposition to relax the rule in [sex-offense] cases⁵⁵

48. *Id.* at 268 (Rehnquist, J., dissenting).

49. *Id.* at 269 (quoting *New York v. Ferber*, 458 U.S. 747, 773 (1982)).

50. *Id.* at 250. See also *supra* text accompanying notes 12–16.

51. FED. R. EVID. 404(b) (1994).

52. FED. R. EVID. 415 (1994).

53. See Thomas J. Reed, *Reading Gaol Revisited: Admission of Uncharged Misconduct Evidence in Sex Offender Cases*, 21 AM. J. CRIM. L. 127, 171 & n.246 (1993).

54. See *id.*

55. *People v. Jenness*, 5 Mich. 305, 319–20 (1858)).

The sentiment behind this declaration remains prevalent today. Not only does the “lustful disposition” exception remain in legal effect in a majority of states, including for cases of child molestation,⁵⁶ but specific federal evidentiary rules enacted by Congress in 1994 codify that common-law treatment of character evidence for child sex offenders.⁵⁷ Rules 414 (“Evidence of Similar Crimes in Child Molestation Cases”) and 415 (“Evidence of Similar Acts in Civil Cases Concerning Sexual Assault or Child Molestation”) were added to the existing structure of the FRE to aid expressly in the prosecution of child molesters.⁵⁸ Both rules allow for the admission of evidence of past acts of molestation, including past convictions as well as, notably, past accusations and acquittals.⁵⁹ They are the first federal evidence rules specifically authorizing the admissibility of propensity evidence.⁶⁰ Although some commentators, including the FRE Advisory Committee,⁶¹ have questioned the fundamental fairness of these rules,⁶² Congress’s addition of the rules has withstood constitutional challenge in the federal courts.⁶³

C. Imposing preemptive penalties against child molesters

While the CPPA’s ban on virtual child pornography did not pass constitutional muster, other statutes tackling similar territory have met with greater constitutional approval, by focusing more specifically on the risk propensities of convicted sex offenders. Starting in the 1990s, and following the well-publicized kidnapping, rape, and mutilation of a seven-year-old boy in Washington in 1988, several states began to impose increasingly restrictive sanctions against the rights of child molesters, citing as justification the prospective dan-

56. Reed, *supra* note 53, at 188.

57. FED. R. EVID. 414, 415 (1994).

58. *Id.* See also FED. R. EVID. 414 advisory committee’s note; FED. R. EVID. 415 advisory committee’s note.

59. See FED. R. EVID. 414 advisory committee’s note; FED. R. EVID. 415 editorial explanatory comment.

60. *But see* FED. R. EVID. 414 advisory committee’s note (explaining that “a fair reading of the Rule” allows a Judge to “exclude a prior act of child molestation on the ground that its probative value is substantially outweighed by its prejudicial effect”); FED. R. EVID. 415 editorial explanatory comment (also explaining that “[a] fair reading of the Rule . . . indicates that Rule 403 remains applicable.”). *Cf.* FED. R. EVID. 403 (explaining that the balancing standard considers whether the evidence’s “probative value is substantially outweighed by the danger of unfair prejudice, confusion of the issues, or misleading the jury, or by considerations of undue delay, waste of time, or needless presentation of cumulative evidence.”).

61. See FED. R. EVID. 414–15 advisory committees’ notes. (1994).

62. See, e.g., Lois M. Natali, Jr. & R. Stephen Stigall, “Are You Going to Arraign His Whole Life?”: *How Sexual Propensity Evidence Violates the Due Process Clause*, 28 LOY. U. CHI. L.J. 1, 29–34 (1996).

63. See, e.g., *United States v. LeCompte*, 131 F.3d 767 (8th Cir. 1997) (reversing in a child sex-abuse case where the district court excluded evidence of prior uncharged sex offenses under Rule 403, reasoning that, “We do so in order to give effect to the decision of Congress, expressed in recently enacted Rule 414, to loosen to a substantial degree the restrictions of prior law on the admissibility of such evidence.”).

gers to children. The State of Kansas, for instance, enacted a sexual predator act in 1994 that allows for indefinitely confining sexually violent predators deemed unable to control their behavior by virtue of a clinically diagnosed “personality disorder” or “mental abnormality.”⁶⁴ The U.S. Supreme Court upheld the constitutionality of the wide reach of this statute.⁶⁵ As the Court stated in a subsequent case regarding the Kansas statute:

[W]e recognize that in cases where lack of control is at issue, “inability to control behavior” will not be demonstrable with mathematical precision. It is enough to say that there must be proof of serious difficulty in controlling behavior. . . . [T]he States retain considerable leeway in defining the mental abnormalities and personality disorders that make an individual eligible for commitment.⁶⁶

In 2002 the State of Iowa also enacted a statute to protect children from the recidivism of child sex offenders. The law had far-reaching implications. It prohibited convicted sex offenders from residing within 2000 feet of a school or child-care facility,⁶⁷ thereby restricting offenders from the majority of housing in many of Iowa’s cities and shunting offenders to rural areas where housing would not necessarily be readily available.⁶⁸ Moreover, it applied both to offenders convicted after the law’s passage and retroactively to those convicted before its enactment.⁶⁹ In upholding the law’s constitutionality, the Eighth Circuit Court of Appeals took a similar tack as the Supreme Court had in the Kansas case. Though acknowledging that no scientific study supported the legislature’s conclusion that the law would increase the safety of children, the Court of Appeals held plaintiff’s argument insufficient to overcome the rationality of the legislative judgment.⁷⁰ The court “reject[ed] this contention because we think it understates the authority of a state legislature to make judgments about the best means to protect the health and welfare of its citizens in an area where precise statistical data is unavailable and human behavior is necessarily unpredictable.”⁷¹ The court noted with approval the fact that twelve other states had established residency restrictions of some kind for sex offenders.⁷²

64. Commitment of Sexually Violent Predators, KAN. STAT. ANN. §§ 59-29a01 to -29a21 (1994). The first such statute had been enacted, not surprisingly, in Washington State, called the Community Protection Act of 1990.

65. *Kansas v. Hendricks*, 521 U.S. 346 (1997).

66. *Kansas v. Crane*, 534 U.S. 407, 413 (2002).

67. IOWA CODE ANN. § 692A.2A(1)–(2) (2002).

68. *See Doe v. Miller*, 298 F. Supp. 2d 844, 851–52 (S.D. Iowa 2004), *rev’d*, 405 F.3d 700 (8th Cir. 2005).

69. *See Miller*, F.3d at 718–23 (holding that the statute survives *ex post facto* analysis).

70. Declining to find a fundamental right at issue (e.g., to intrastate travel), the court applied a rational-basis standard. *Miller*, 405 F.3d at 712–14.

71. *Id.* at 714.

72. *Id.* *See also* Jenifer Warren, *Sex Offender Crackdown Measure Ties into a National Trend*, L.A. TIMES, Sept. 18, 2006, at B1 (reporting that the number of states imposing residency restrictions has, as of 2006, reached at least 18).

While the Iowa law involved a general ban on sex offenders, an Indiana ban targeting a single offender fueled even more commentary and public controversy⁷³ and illustrates the lengths to which government may go to prevent potential harm to children. The ban resulted in a lawsuit, *Doe v. City of Lafayette, Indiana*, involving a man, referred to as John Doe in the case, with a history of sexual offenses against children.⁷⁴ One evening in January 2000, Doe had visited a city park where he noticed several children playing. According to the facts of the case, he lingered for fifteen to thirty minutes to observe them playing, during which time he entertained thoughts of having sexual contact with them.⁷⁵ Doe left the park without incident.⁷⁶ His last conviction had occurred almost ten years prior, in 1991. At the time of the 2000 park visit, he was on probation and in treatment for his sexual proclivities toward children (and had been in treatment since 1990 on a weekly basis).⁷⁷ Distressed over what he considered to be an unpleasant incident, Doe revealed the incident to his therapist and also his voluntary support group.⁷⁸ Soon thereafter he began, of his own volition, weekly injections of Depo-Provera, designed to suppress his urges.⁷⁹ In the meantime, an anonymous source informed Doe's probation officer of the incident, leading to conversations between local government officials as to possible remedial action. Orders were issued banning Doe from the city's parks and schools, and Doe challenged the bans as violating his constitutional rights.⁸⁰

In court, Doe's therapist testified that while Doe would always have sexual urges toward children, in her professional opinion, he had learned how to resist them.⁸¹ Yet the Court of Appeals for the Seventh Circuit was not persuaded by the doctor's opinion and rejected the notion that Doe was being punished for thinking inappropriate thoughts.⁸² The court instead argued that Doe was being punished for the act of going to the park, which, in spite of his therapist's assertions, involved "the not-so-remote possibility" that he might act on his sexual urges.⁸³ According to the Court, even if Doe's First Amendment interests

73. See, e.g., Cloud, *supra* note 28; Jacob D. Mahle, *We Don't Need No Thought Control: Doe v. City of Lafayette*, 74 U. CIN. L. REV. 235 (2005); Marbree D. Sullivan, *The Thought Police: Doling out Punishment for Thinking About Criminal Behavior in John Doe v. City of Lafayette*, 40 NEW ENG. L. REV. 263 (2005); Clay Calvert, *Freedom of Thought, Offensive Fantasies and the Fundamental Human Right to Hold Deviant Ideas: Why the Seventh Circuit Got it Wrong in Doe v. City of Lafayette, Indiana*, 3 PIERCE L. REV. 125 (2005).

74. *Doe v. City of Lafayette*, 377 F.3d 757 (7th Cir. 2004).

75. *Id.* at 759–60.

76. *Id.* at 760.

77. *Id.* at 759–60.

78. *Id.* at 775 (Williams, J., dissenting).

79. *Id.*

80. *Id.* at 760 (explaining that *Doe* "challenges only the ban from the public parks, and not the public schools.").

81. *Id.* at 760–61.

82. *Id.* at 765–67.

83. *Id.* at 763.

were implicated, constitutional protection would still be excepted under the incitement doctrine.⁸⁴ Indeed, the court regarded Doe's thoughts as incendiary propellants toward the kind of "imminent lawless action" characteristic of that doctrine.⁸⁵ The court also advanced the somewhat tortured, complementary argument that, even if Doe's First Amendment interests were implicated, his thoughts would nonetheless amount to "a form of child pornography," which is another constitutionally unprotected category of speech.⁸⁶ Lastly, in speaking to Doe's asserted due process interest to wander and loiter in public parks, the court noted that, even if strict scrutiny review were applicable, the ban would survive this rigorous analysis as being narrowly tailored to serve a compelling governmental interest.⁸⁷ The court reached this conclusion despite the fact that the ban carried no termination date, contained no geographic limitations within the proscribed public areas,⁸⁸ and permitted no process of procedural review.⁸⁹

D. A wide berth

As Justice Williams pointed out in *Doe*, the line between preventing potential harm to children via consumption of virtual child pornography, at issue in *Ashcroft*, and preventing potential harm from thoughts at a public venue, at issue in *Doe*, is a narrow one indeed.⁹⁰ For his part, Justice Williams could not rationally reconcile the majority's reasoning in *Doe* with the Supreme Court's opinion in *Ashcroft*.⁹¹ "By way of comparison," Williams offered, "courts would not sanction criminal punishment of an individual with a criminal history of bank robbery (a crime, like child molestation, with a high rate of recidivism) simply because she or he stood in the parking lot of a bank and thought about robbing it."⁹²

84. *Id.* at 764 n.7.

85. *Id.* (quoting *Brandenburg v. Ohio*, 395 U.S. 444, 447 (1969)). The *Brandenburg* incitement doctrine, designed to protect freedom of speech, holds that speech can be constitutionally proscribed only if it "is directed to inciting or producing imminent lawless action and is likely to incite or produce such action." *Brandenburg*, 395 U.S. at 447. Justice Kennedy's opinion in *Ashcroft* referenced the incitement criterion developed in *Brandenburg* for suppressing speech, but he did not apply the incitement standard to speech that explicitly advocates the use of force or violence in the context of virtual child pornography. *Ashcroft*, 535 U.S. at 253-54.

86. *City of Lafayette*, 377 U.S. at 764 n.7.

87. *Id.* at 773.

88. *Id.* The *City of Lafayette* dissent notes that the ban encompassed "several large parks, many smaller neighborhood parks, a zoo, a golf course, a sports complex, a baseball stadium, and several pools." *Id.* at 775 (Williams, J., dissenting).

89. *Id.* at 775 (Williams, J., dissenting).

90. *Id.* at 777.

91. *Id.*

92. *Id.* at 783.

As the foregoing discussion suggests, convicted sex offenders constitute a separate category of criminals, bringing somewhat diminished constitutional rights in tow.⁹³ As one group of commentators explains:

The question whether sex offenders should be distinguished from other criminals has been affirmatively answered by scores of legislatures. Political forces in a variety of settings have caused policy makers to craft legislation designating sex offenders as a separate category, authorizing procedures outside both the criminal law and the civil commitment process.⁹⁴

This trend in the law to designate sex offenders for separate treatment has unfortunately proceeded relatively uninformed by relevant scientific research. A California ballot initiative that passed by large margins in November 2006 portends the increasingly undisciplined handling of such legislation.⁹⁵ The California initiative not only permits indefinite confinement of sexually violent predators, like the Kansas statute,⁹⁶ but also allows offenders to be classified as sexually violent predators after a single assault (whereas the previous criterion in California required two offenses).⁹⁷ Additionally, the California initiative imposes residency requirements on sex offenders, restricting offenders from living within 2000 feet of a park or school, similar to the Iowa ban.⁹⁸ But the California restriction differs from Iowa's in that it applies to all sex offenders, regardless of their crime or risk of re-offending, and requires lifelong monitoring of every last one via an electronic tracking device.⁹⁹

E. Toward a constitutionally sound approach

Legislatures and courts, undoubtedly informed by political opinion, clearly see pedophiles as posing great risks to children. Regrettably, legislative and judicial judgments appear to be regularly based on feeling as much as fact, and notably without consideration of individual difference factors among pedophiles, which may serve to better tailor existing laws to external realities. As we will demonstrate in the following sections, different groups of pedophiles do show different risks for offending, and child pornography serves different purposes for different consumers. Effective social and legal policy is best informed by

93. Sex offender registration statutes in operation in every state are another example of the diminished rights of convicted sex offenders. See FBI, *Investigative Programs: Crimes Against Children - State Sex Offender Registry Web Sites*, <http://www.fbi.gov/hq/cid/cac/states.htm> (providing links to every state's sex offender registry).

94. R. Lieb, V. Quinsey & L. Berliner, *Sexual Predators and Social Policy*, 23 *CRIME & JUST.* 43, 53 (1998).

95. The November 2006 California ballot initiative was Proposition 83. For a discussion, see Warren, *supra* note 72.

96. See *supra* notes 64–66 and accompanying text.

97. See Warren, *supra* note 72.

98. See *supra* notes 67–72 and accompanying text.

99. See Warren, *supra* note 72.

rigorous empirical and theoretical considerations, but the current emotion-laden debate about sexual offending is not conducive to making these considerations.¹⁰⁰

Somewhat disturbingly, despite the fact that legislation premised upon indeterminate recidivist propensities of child sex offenders generally fails to define what those tendencies might be to any degree of scientific certainty or precision, reviewing courts have not viewed this defect as fatal. Behavioral unpredictability is assumed out of hand to uphold laws based on “not-so-remote” possibilities of recidivism.¹⁰¹ In response to this muddled legislative climate and in the interests of developing a sound constitutional approach for addressing the issue of virtual child pornography, we now turn to the available psychological and criminological literature regarding child pornography’s effects on pedophiles.

III.

RESEARCH ON CHILD PORNOGRAPHY

A. Overview

The quantity and quality of the research concerning the effects of child pornography consumption leave a great deal to be desired. This is not surprising, in light of the severe difficulties of implementing such research in the context of the illegality of such pornography. Because of the real risks to real children, approval for any research that involves actual exposure to child pornography in research settings is difficult to obtain, particularly if researchers might expose participants to child pornography that may theoretically have any adverse effects on them. There have been a few relevant studies with non-pedophiles or non-child molesters, but these have examined only a very small subset of the relevant issues.¹⁰² More common are studies with pedophiles and child molesters that survey their usage of child pornography.

100. Examples of legislative short-sightedness abound. *See id.* Warren suggests the Iowa legislature may not have acted as it did had it recognized that the law’s residency provisions would in effect banish sex offenders from urban areas, only to dump them upon rural areas ill-equipped to provide the kinds of social services needed to help offenders stay law-abiding. Having now witnessed the residency restrictions backfire, Iowa prosecutors who formerly had pressed for the law’s passage now find themselves pushing for its repeal. *See id.* (California, too, may follow a similar course—map surveys show that California’s proposed residency restrictions would banish offenders from the vast majority of San Francisco and much of urban Los Angeles.) Warren similarly implies that had the city of Lafayette heeded a U.S. Department of Justice report issued in 2000, debunking the prevailing myth that strangers pose the greatest risk to children and showing instead that only 7% of juvenile sexual assault is by strangers, it may not have passed the ordinance at issue in *City of Lafayette*. *Id.*

101. *City of Lafayette*, 377 F.3d at 763.

102. *See* Bryant Paul & Daniel Linz, *The Effects of Exposure to Virtual Child Pornography on Viewer Cognitions and Attitudes Toward Deviant Sexual Behavior*, COMM. RES. (forthcoming). The researchers sought to study the impact of exposure to child pornography on non-pedophiles’

The research literature does not include systematic studies with random assignment to conditions intended to examine the effects of child pornography on non-pedophiles versus pedophiles. It does include studies in which pedophiles and/or child molesters have been asked about their perceptions of the impact of child pornography on them and studies examining the correlation between self-reported arousal to child pornography and having been convicted for possessing such pornography. These studies, which we describe below, may provide some insight, however limited, into the overlap between use of child pornography and other characteristics or behaviors.

B. Arousal to child pornography

Department of Justice statistics indicate that the number of child pornography investigations is on the rise.¹⁰³ Clinicians and researchers, therefore, may increasingly be called upon to decide on risk profiles¹⁰⁴ for potential offenders. As an initial matter, we might consider who is sexually aroused by child pornography, with the possibility that child sex offenders may fall into this category. If such arousal occurs only for a very small percentage of the population, there would be rather different implications of the potentially wide availability of virtual child pornography than if the existence and/or possibility of significant sexual arousal to child images actually occurs in a considerable percentage of the population. If only a small percentage could become aroused, we would want to focus our potential concerns only on that segment. However, if a much larger group might be aroused, this would justify considering research about potential adverse effects involving non-pedophiles or non-child molesters. Although sexual arousal to pedophilic stimuli per se is, of course, in and of itself not equivalent to any act of child molestation, it may well increase the motivation for and perceived attraction of such acts.

associations of children and sexuality as well as on their acceptance of child pornography. Because of the legal and ethical barriers to using actual child pornography, they used images from *Barely Legal* magazines that portray youthful looking girls who in fact are at least eighteen years old. This research did find that exposure to child pornography may result in stronger associations between children and sexuality (as measured by a word-recognition task). However, this research did not find support for the possibility that exposure to such barely legal pornography caused a change in people's acceptance of child pornography or adult sex with children.

103. D. Finkelhor & R. Ormrod, OFFICE OF JUVENILE JUSTICE & DELINQUENCY PREVENTION, OFFICE OF JUSTICE PROGRAMS, U.S. DEP'T OF JUSTICE, *Child Pornography: Patterns from NIBRS*, JUV. JUST. BULL. NCJ 204911 (Dec. 2004), available at <http://www.ncjrs.gov/pdffiles1/ojdp/204911.pdf>. See also Susannah Rosenblatt, *Are Web Sex Predator Watchdogs the Good Guys or Grandstanders?*, L.A. TIMES, Oct. 7, 2006, at B1 (reporting that FBI cases opened against online child pornographers have increased 2,000% in the last decade).

104. Risk profiles use information about the characteristics that predict outcome behaviors, such as sexual offending, to attempt to determine who is relatively at greater risk for committing such behaviors. Whereas clinicians typically create profiles based on their training and experience, various instruments described later in this article have been used to derive predictions that are more systematic, objective, and accurate than typically demonstrated by clinicians. See, e.g., Michael C. Seto, James M. Cantor & Ray Blanchard, *Child Pornography Offenses Are a Valid Diagnostic Indicator of Pedophilia*, 115 J. ABNORMAL PSYCHOL. 610 (2006).

Studies of undergraduate students and the general population suggest that sexual interest or arousal in children is not confined to a "sick few." In one sample of 193 university males, researchers found that 21% reported some sexual attraction to small children, 9% had fantasized about having sex with children, 5% admitted to masturbatory fantasies involving sex with children, and 7% indicated some likelihood of having sex with children if they could be assured of not being caught or punished.¹⁰⁵ In another study of undergraduate men, 22 of 100 men reported sexual attraction to a child (as did 3 of 100 undergraduate women surveyed).¹⁰⁶ Using physiological indices of penile arousal (i.e., by a penile plethysmograph), researchers have found that significant numbers of men also show penile response to images of children. For example, in one sample of non-pedophilic men, erections to pictures of pubescent and pre-pubescent girls averaged 70% and 50%, respectively, as strong as their responses to adult females.¹⁰⁷ Over 25% of community participants in another study indicated pedophilic interests via self-reporting or penile-response measures.¹⁰⁸

Granting that a significant portion of the male population demonstrates *some* pedophilic interests, this does not mean that all men so identified are likely to fit the clinical diagnosis of pedophilia. As defined by the American Psychiatric Association, a clinical diagnosis of pedophilia requires "[o]ver a period of at least 6 months, recurrent, intense sexually arousing fantasies, sexual urges, or behaviors involving sexual activity with a prepubescent child or children (generally age 13 years or younger)."¹⁰⁹ It is also important to again emphasize

105. John Briere & M. Runtz, *University Males' Sexual Interest in Children: Predicting Potential Indices of "Pedophilia" in a Non-forensic Sample*, 13 CHILD ABUSE & NEGLECT 65 (1989). None of these reports indicate an actual likelihood of committing a crime under current conditions. However, considerable research supports the validity of reports of likelihood of committing offenses (particularly rape) as an indicator of attraction to these acts by, for example, demonstrating that individuals from the general population who report some likelihood of committing offenses under these hypothetical conditions are in fact more like convicted offenders on various relevant criteria than those who report no likelihood of committing these offenses. See, e.g., N. Malamuth, *Rape Proclivity Among Males*, 37 J. SOC. ISSUES 138 (1981).

106. John Briere & Kathy Smiljanich, *Self-reported Sexual Interest in Children: Sex Differences and Psychosocial Correlates in a University Sample*, 11 VIOLENCE & VICTIMS 39 (1996).

107. Vernon L. Quinsey, Clayton M. Steinman, S.G. Bergersen & T.F. Holmes, *Penile Circumference, Skin Conductance, and Ranking Responses of Child Molesters and "Normals" to Sexual and Nonsexual Visual Stimuli*, 6 BEHAV. THERAPY 213, 216 (1975).

108. Gordon C. Nagayam Hall, Richard Hirschman & Lori L. Oliver, *Sexual Arousal and Arousability to Pedophilic Stimuli in a Community Sample of Normal Men*, 26 BEHAV. THERAPY 681 (1995). Research with men from the general population has demonstrated that a similar measure of sexual arousal to rape stimuli is by itself quite highly correlated with reports of actual sexual aggression in naturalistic settings, in comparison to other risk factors. The incidence of such arousal when combined with information from the other risk factors is indeed a strong predictor of such actual aggression. See, e.g., N. Malamuth, *Predictors of Naturalistic Sexual Aggression*. 50 J. PERSONALITY & SOC. PSYCHOL. 953 (1986). As described later in this article, this measure of sexual arousal has also proven to be a relatively strong predictor in samples of child molesters.

109. AMERICAN PSYCHIATRIC ASS'N, DIAGNOSTIC AND STATISTICAL MANUAL OF MENTAL DISORDERS 572 (4th ed. text rev. 2000).

that pedophilia and sexual offending against children are not synonymous. Some pedophiles do not act on their sexual attractions, and some sex offenders with child victims act opportunistically but are not distinctively attracted to children.¹¹⁰ Of adult offenders with child victims, it is estimated that 40–50% meet the diagnostic classification of pedophilia.¹¹¹ Therefore, pedophilia is clearly an important, though not solitary, risk factor for sexual molestation (and, as described later, for interest in child pornography). However, as with all risk factors, it is necessary to consider pedophilia in the context of the confluence of other protective and risk factors, through a framework we discuss in greater length later in this article.

C. Child pornography use as an indicator of pedophilia

If sexual arousal to images of children is not necessarily an indication of a mental disorder and if a substantial percentage of the male population might evidence such arousal under some circumstances, perhaps the mere possession of child pornography is not necessarily an indication of pedophilia but might reflect a more-general interest in sexual variety.¹¹²

To examine whether the use of child pornography is a valid indicator of pedophilia,¹¹³ Michael Seto and colleagues assessed the pedophilic interests of 685 male patients referred to an addiction and mental health center between 1995 and 2004 because of illicit sexual behaviors.¹¹⁴ The sample consisted of men charged with child pornography offenses, men charged with sex offenses against children but having no history of child pornography offending, men charged

110. Michael C. Seto, *Pedophilia and Sexual Offenses Against Children*, 15 ANN. REV. SEX RES. 321, 323 (2004).

111. *Id.* at 326.

112. Relevant findings in this area have to be considered in light of the fact that the possession of child pornography is considered a serious crime and that anyone with sufficient motivation to violate the law by actually possessing such materials might be particularly (and uniquely) aroused by such images. Others, who might have been motivated to possess such materials if the law did not severely prohibit them, would presumably be far less likely to do so in the current legal climate.

113. Some may consider this an obvious conclusion or might even label it a tautology analogous to asking whether drug offenders necessarily have a strong preference for the drug they were convicted of possessing or using. We contend that the answers to such questions are not obvious. For instance, individuals who use certain drugs may not necessarily actually have a strong preference for such drugs but may use them because they are cheap or easily available. Indeed, as we describe in this article, research has shown that many child molesters do not actually prefer children as sexual stimuli but are opportunistic offenders who may abuse children because they are more vulnerable targets than more mature men or women. Another possibility is that some child pornography users prefer any novelty in sexual stimuli and therefore use child pornography as well as other types of pornography rather than having a particular preference for pedophilic stimuli.

114. Seto, Canter & Blanchard, *supra* note 104. The sources of referrals included parole and probation officers (36%), lawyers (24%), self-referrals through a physician (21%), and correctional institutions (18%). *Id.* at 611.

with sex offenses against adults, and general sexology patients.¹¹⁵ About half of the child pornography offenders had a history of sex offenses against children and half did not. Seto and his colleagues found that in spite of this difference, both types of child pornography offenders were more likely to show a higher pedophilic pattern of sexual arousal (as measured by phallometric testing of penile response) than were all other groups, including even the group of actual child sex offenders.¹¹⁶ More specifically, child pornography offenders were nearly three times as likely to be phallometrically identified as pedophiles than were actual offenders against children who had no record of child pornography offending.¹¹⁷ There were no significant differences in pedophilic sexual arousal between the two groups of child pornography offenders (i.e., those with and without a history of child sexual offending), although those with a history of offending showed a statistically insignificant tendency to have higher pedophilic indices.¹¹⁸

Based on these results, Seto, et al., concluded that child pornography offending is a valid indicator of pedophilia.¹¹⁹ They also offered an explanation for why child pornography offending might better predict pedophilia than child sexual offending would alone. The problem with relying on child sexual offending is that it is overinclusive; not all men who victimize children are pedophiles. Child pornography is a more accurate indicator, because men often choose to view pornography corresponding to their sexual interests. Thus, child pornography offenders might be expected to have a higher pedophilic index than would a group of men that included both pedophiles and general sexual opportunists.¹²⁰

D. Were sexual offenders exposed to more pornography?

Research that specifically examines the experiences of child molesters with pornography during their own child or adolescent developmental years is somewhat limited but nonetheless informative. For instance, one study surveyed four groups of juvenile offenders (rapists, child molesters, violent non-sex offenders, and status offenders).¹²¹ Sex offenders (i.e., juvenile rapists and child molesters) reported more exposure to hard-core pornography than did the other groups

115. *Id.*

116. *Id.* at 613. A pedophilic pattern of sexual arousal measures penile response to stimuli depicting children against penile response to stimuli depicting adults. *Id.*

117. *Id.*

118. *Id.*

119. *Id.*

120. *Id.*

121. Michelle E. Ford & Jean A. Linney, *Comparative Analysis of Juvenile Sexual Offenders, Violent Nonsexual Offenders, and Status Offenders*, 10 *J. Interpersonal Violence* 56, 59 (1995). Status offenders are youth adjudicated on charges of incorrigibility, runaway, or truancy without other nonstatus offenses.

(42% to 29%).¹²² Comparisons also indicated that sex offenders had been exposed to pornography at an earlier age than the other offenders, and further that child molesters had been the most frequently exposed.¹²³ Overall, these data do indicate that child molesters have had more pornography exposure than other groups.¹²⁴

Amount and time of exposure to pornography, however, might not be the most important variable to consider. This is illustrated by some research with rapists. While some of this research has often been cited as indicating that during their childhood rapists had less exposure to pornography than controls did, some of the conclusions drawn from such findings can be misleading.¹²⁵ When considered in depth, the research shows that while rapists actually report less exposure to pornography in adolescence than control comparison groups do, the type of pornography rapists were exposed to and the degree to which they were affected differed.¹²⁶ For example, in one study rapists reported an earlier age of "peak experience" with pornography.¹²⁷ In addition, they were far more likely to have encountered pornographic photos displaying explicit sexual acts (rather than nude photographs) at an early age and to have had a greater desire to imitate the activity portrayed in pornography (although they said they were less likely to have actually done it).¹²⁸ Rapists were more likely to relate daily masturbation to thoughts of pornography, to have developed a stronger interest in pornography early in life, to have become repeatedly aroused by a particular theme, and to have more feelings of frustration and guilt related to their pornography exposure than control subjects.¹²⁹ We anticipate that research on child molesters would similarly find complex and differing early-childhood and adolescent experiences and that the amount of exposure may not be the only or even major dimension to examine; how the exposure affected the person may be more relevant.¹³⁰

122. *Id.* at 66.

123. *Id.*

124. Of course, as with any correlation, this does not in and of itself reveal causation.

125. See, e.g., William A. Fisher & Guy Grenier, *Violent Pornography, Antiwoman Thoughts, and Antiwoman Acts: In Search of Reliable Effects*, 31 J. SEX RES. 23, 23 (1994).

126. MICHAEL J. GOLDSTEIN, HAROLD S. KANT & JOHN HARTMANN, *PORNOGRAPHY AND SEXUAL DEVIANCE* (1973).

127. *Id.*

128. *Id.*

129. *Id.*

130. As described below, research of a large sample of sex offenders (particularly child molesters) that tracked them over a fifteen-year period following release from incarceration similarly revealed that their use of pornography did significantly predict criminal recidivism above and beyond other risk factors. See D.A. Kingston, P. Fedoroff, P. Firestone, S. Curry & J.M. Bradford, *Pornography Use and Recidivism in Sexual Offenders* (paper presented at the Annual Meetings of the Ass'n for the Treatment of Sexual Aggressors, Chicago 2006). See also D.A. Kingston, P. Fedoroff, P. Firestone, S. Curry & J.M. Bradford, *Pornography Use and Sexual Aggression: The Impact of Frequency and Type of Pornography on Recidivism Among Sexual Offenders*, *AGGRESSIVE BEHAV.* (forthcoming).

E. Are child pornography offenses associated with molestation?

Offender Samples. A considerable number of studies examine the overlap between offenses for child pornography and other offenses, particularly child molestation. With only a couple of exceptions noted below, we were unable to find any samples of regular child pornography users who have not been identified by the judicial system and who have reported whether they have engaged in any behavioral offending against children. The studies described below involved individuals convicted of crimes. Although these studies do provide some useful information, it should be noted that there are, of course, some problems of interpretation, since the samples used are necessarily skewed; they measure individuals who have been successfully prosecuted for various crimes.

In considering the relation of child pornography offenses to sex offenses against children, it is notable that in a number of studies with offender samples, there is considerable overlap between having been convicted of or charged with child pornography offenses and such a conviction of or charges with other offenses. About half (43 of 100 men) of the sample of child pornography offenders studied by Seto and colleagues in the study described above had also been charged with a child sexual offense.¹³¹ By comparison, another recent study by Seto and other associates found that 24% of a sample of 201 child pornography offenders had a prior history of contact sexual offenses.¹³² The sample of men in this latter study had been culled by the researchers from a sex offender registry in Ontario, Canada, that first became active in April 2001.¹³³ Of the 201 offenders, two-thirds had been charged with only child pornography offenses at the time they were adjudicated for their index offense; the others had been charged concurrently with other criminal offenses as well.¹³⁴ Accounting for both prior and concurrent criminal history, 76 offenders had committed child pornography offenses only, 49 had been involved in nonsexual criminal offending as well, and 76 had been involved in sexual offending with a victim (age unknown).¹³⁵

These researchers sought to examine how likely these men were to commit sexual offenses against children subsequent to punishment for their adjudicated index offense.¹³⁶ Information about new offenses was procured from a national criminal database that also contained data about release dates from correctional institutions.¹³⁷ When follow-up data were obtained in April of 2004, those

131. Seto, Cantor & Blanchard, *supra* note 104, at 611.

132. Michael C. Seto & Angela W. Eke, *The Criminal Histories and Later Offending of Child Pornography Offenders*, 17 *SEXUAL ABUSE: J. RES. & TREATMENT* 201, 205 (2005).

133. *Id.* at 203.

134. *Id.* at 205–06.

135. *Id.* at 207.

136. *Id.*

137. *Id.* at 205.

monitored in the study had been out of jail and at risk of re-offending for an average of about thirty months.¹³⁸ Of the 201 child pornography offenders, thirty-four (17% of the sample) committed new criminal offenses in the follow-up period.¹³⁹ Of these, nine (4% of the sample) committed new sexual offenses involving physical contact with a victim.¹⁴⁰ Eleven (6% of the sample) incurred a new charge or conviction for child pornography offenses.¹⁴¹ Notably, of the 76 men with a history of child pornography offense only, and not a prior contact offense, only one person committed a contact sexual offense in the 2.5-year average follow-up period.¹⁴²

Importantly, these statistics may suggest that, for some category of offenders, child pornography may be used for reasons other than promoting abusive behaviors (e.g., as a masturbatory aid). Of some relevance in this regard, a 2001 study of 316 pedophiles assessed at an outpatient sexology clinic found that those pedophiles having no known child victims (26 of the 316) actually reported greater usage of pornography than the other pedophiles surveyed.¹⁴³

A 1997 study that also assessed pornography consumption found that child molesters ($N = 150$) were generally higher users of pornography than non-molesters ($N = 122$) but that the most common type of material used by these individuals involved nudity or consenting sexual activities between adults.¹⁴⁴ Approximately 93% of child molesters reported having some fantasies about sexually offending against children.¹⁴⁵ Over one-third used pornographic materials shortly before sexually offending against their child victims.¹⁴⁶ It was also reported that many of the child molesters perceived that pornography generally had had a negative effect on their lives.¹⁴⁷

Another related study focused on a sample of 561 sex offenders.¹⁴⁸ Of these, 181 had offended against children, 144 had offended against adults, and 223 were incest offenders.¹⁴⁹ Ninety-six of the offenders (17%) reported using

138. Because some had committed their child pornography offenses before the inception of the registry and were already on parole or probation when first required to register, average time at risk was relatively substantial in relation to the April 2001 to April 2004 period under study. All offenders faced some time at risk (i.e., not in custody) during this period. *Id.*

139. *Id.* at 206.

140. *Id.*

141. *Id.*

142. *Id.* at 207.

143. Seto, Cantor & Blanchard, *supra* note 104 (citing J.P. Fedoroff, K. Smolewska, Z. Selhi, E. Ng & J.M.W. Bradford, *Victimless Pedophiles* (poster presented at the Annual Meeting of the Int'l Acad. of Sex Research, Montreal, July 2001)).

144. David L. Wheeler, *The Relationship Between Pornography Usage and Child Molesting*, 57(8-A) DISSERTATION ABSTRACTS INT'L SERIES A: HUMAN. & SOC. SCI. 3691 (1997).

145. *Id.*

146. *Id.*

147. *Id.*

148. Ron Langevin & Suzanne Curnoe, *The Use of Pornography During the Commission of Sexual Offenses*, 48 INT'L J. OFFENDER THERAPY & COMP. CRIMINOLOGY 572 (2004).

149. *Id.* at 576.

pornography during their crimes,¹⁵⁰ with most (89%) of the ninety-six men reporting that pornography had been generally available to them prior to their crimes.¹⁵¹ Fifty-three of the pornography users (55%) showed pornographic materials to the child victims as part of "grooming" them for the crimes, with the majority of the pornography used being heterosexual adult pornography.¹⁵² Thirteen percent of the men used the pornography to self-stimulate themselves prior to the crime but not during the crime. About 40% of the offenders against children took pictures of their victims to use for self-stimulation later.¹⁵³

By comparison, only 30% of the sex offenders who did not use pornography in their crimes reported pornography being generally available to them.¹⁵⁴ Use of pornography was considerably more common among offenders against children than offenders against adults.¹⁵⁵ Whereas 21% of the offenders against children used pornography in the course of their crimes, only 8% of the offenders against adults used pornography.¹⁵⁶ These overall findings are similar to those of several other studies.¹⁵⁷

William Marshall compared samples of male sex offenders (including rapists and child molesters) to male non-offenders.¹⁵⁸ He found that when comparing the current "use of any type of 'hard core' sexual stimuli," most groups of sexual offenders generally did use pornography more than non-offenders.¹⁵⁹ For example, in terms of current use, 67% of heterosexual child molesters and 83% of rapists, as compared to 29% of non-offenders, reported currently using pornography.¹⁶⁰ However, he noted that "child molesters do not have remarkably higher access to 'kiddie porn' than do other subjects . . ."¹⁶¹ Marshall also reported that rapists and child molesters frequently used pornography in a deliberate manner, "while preparing themselves to commit an offense."¹⁶² Elliott, Browne, and Kilcoyne similarly reported that, of 91 child

150. *Id.* at 579.

151. *Id.* at 582.

152. *Id.* at 581.

153. *Id.*

154. *Id.*

155. *Id.* at 579.

156. *Id.* at 580.

157. See, e.g., Judith Becker & Robert M. Stein, *Is Sexual Erotica Associated with Sexual Deviance in Adolescent Males?*, 14 INT'L J.L. & PSYCHIATRY 85 (1991); D.L. Carter, R.A. Prentky & R. Knight, *Use of Pornography in the Criminal and Developmental Histories of Sexual Offenders*, 2 J. INTERPERSONAL VIOLENCE 196 (1987); D. Howitt, *Pornography and the Paedophile: Is it Criminogenic?*, 68 BRITISH J. MED. PSYCHOL. 15 (1995); Robert Langevin, Reuben A. Lang, Percy Wright, Lorraine Handy, Roy R. Frenzel & Edward L. Black, *Pornography and Sexual Offenses*, 1 SEXUAL ABUSE: A J. RES. & TREATMENT 335 (1988).

158. W.L. Marshall, *The Use of Sexually Explicit Stimuli by Rapists, Child Molesters, and Nonoffenders*, 25 J. SEX RES. 267 (1988).

159. *Id.* at 279 tbl.2.

160. *Id.*

161. *Id.* at 279.

162. *Id.* at 267.

sex abusers interviewed, 21% said they used pornography to lessen their inhibitions prior to committing child abuse.¹⁶³

Researchers have hypothesized explanations as to why a considerable number of child molesters report using pornography in connection with their crimes, even while often reporting the use of adult pornography, rather than exclusively child pornography. Some investigators have emphasized the illegality and the lack of easy availability of child pornography relative to other types but have also speculated regarding other possible reasons:

Perhaps the heterosexual adult pornography was intended mainly to arouse the child's curiosity. However, a number of the men clearly used the adult materials for a combination of self-stimulation and to groom and excite their victims. Another possible explanation is that these men were aroused by heterosexual adult pornography as well as by child pornography. Men who sexually assault children are a mixed group, some of whom are as attracted to adult women as to children. Others show courtship disorders . . . in which exhibitionism or voyeurism, for example, may be as stimulating to them as the body characteristics of children . . .¹⁶⁴

A study in Ireland of a group of thirteen men convicted of downloading child pornography is quite informative, despite the small sample.¹⁶⁵ The researchers concluded that child pornography served different functions: e.g., as a masturbatory aid, in facilitating online relationships within communities of pedophiles, and in reinforcing perceived permission to act on fantasies.¹⁶⁶ One interviewee noted that downloaded child pornography "made me want to do the things I wanted to do. It gave me more courage to do them . . . knowing that I've seen it on there . . . they were doing it . . . I can do it."¹⁶⁷ The researchers concluded that for some offenders, child pornography "was used as a substitute for actual offending, whereas for others, it acted as both blueprint and stimulus for a contact offense."¹⁶⁸ Importantly, other studies suggest that sophisticated child sex offenders may be more likely to use pornography as a stimulus to

163. Michele Elliott, K. Browne & J. Kilcoyne, *Child Sexual Abuse Prevention: What Offenders Tell Us*, 19 CHILD ABUSE & NEGLECT 579, 582 (1995). It is reported that an additional 14% of the interviewees stated that they used pornography to develop strategies to approach children. *Id.* at 585. See also J. Craissati & G. McClurg, *The Challenge Project: Perpetrators of Child Sexual Abuse in South East London*, 20 CHILD ABUSE & NEGLECT 1067, 1071 (1996) (15% of the 80 convicted child molesters stated that they used child pornography prior to committing child abuse).

164. Ron Langevin & Suzanne Curnoe, *The Use of Pornography During the Commission of Sexual Offenses*, 48 INT'L J. OFFENDER THERAPY & COMP. CRIMINOLOGY 572, 584 (2004).

165. See Ethel Quayle & Max Taylor, *Child Pornography and the Internet: Perpetuating a Cycle of Abuse*, 23 DEVIANT BEHAV. 331 (2002).

166. *Id.*

167. *Id.* at 340.

168. *Id.* at 354.

further offense than less-premeditated, less-experienced offenders.¹⁶⁹ Proulx and colleagues found that half of a sample of extra-familial child sex offenders who explicitly planned their offenses and who may have had more experience in offending used pornography in the twelve hours preceding their offense; only 13% of unpremeditated offenders reported such use.¹⁷⁰ This is a highly statistically significant difference between groups.¹⁷¹ The type of pornography used was not reported in this study.¹⁷²

Although the research in this area has many limitations and certainly does not lead to any simple implications vis-à-vis the potential impact of virtual child pornography, there are some relevant conclusions that seem appropriate. At the least, a considerable minority of sexual offenders against children report that the use of some form of pornography had some salient influence on their criminal behavior. The type of pornography used is sometimes not reported in these studies, and when it has been reported, it is not necessarily exclusively child pornography but may also include adult pornography. Some observers may appropriately conclude, therefore, that any restrictions on the availability of child pornography would be irrelevant, since potential offenders could easily access other types of pornography. Although we recognize the justification for such a conclusion, we remind the reader of the research reviewed earlier indicating a strong connection between the use of child pornography and pedophilia and between pedophilia and child molestation. We have emphasized that pedophilia is not in and of itself determinative of child molestation. Yet the fact that a substantial percentage of child molesters report that pornography use increased their likelihood of offending, and the fact that those who offend repeatedly against children are more likely to be pedophilic, suggest that the wider availability of any form of child pornography to such offenders (including virtual child pornographic images indistinguishable from that using actual children) is likely to add fuel to the fire. Although we cannot state with confidence that restrictions against the use of any form of child pornography by such individuals cannot be easily circumvented by substituting other stimuli (e.g., the *Sears Catalogue* or adult pornography), it may be judicious to attempt to limit the particular form of pornography most similar to the offenses that we seek to prevent.

Non-Forensic Samples. In non-forensic populations, a separate source of information about the reported association of child pornography with sexual offending comes from an anonymous Internet survey that solicited participants by announcements posted on various Internet sites.¹⁷³ Respondents, 290 self-

169. Jean Proulx, Christine Perreault & Marc Ouimet, *Pathways in the Offending Process of Extrafamilial Sexual Child Molesters*, 11 *SEXUAL ABUSE: A J. RES. & TREATMENT* 117 (1999).

170. *Id.*

171. *See id.*

172. *Id.*

173. *See* David L. Riegel, *Letter to the Editor, Effects on Boy-Attracted Pedosexual Males of Viewing Boy Erotica*, 33 *ARCHIVES SEXUAL BEHAV.* 321 (2004).

identified "Boy-Attracted Pedosexual Males,"¹⁷⁴ reported, among other things, on their viewing of boy erotica, their reasons for viewing it, and its effects upon them.¹⁷⁵ Of the 290 respondents, about one-third (34%) expressed that they viewed boy erotica on the Internet "quite regularly," 26% "frequently," 18% "occasionally," 11% "sporadically," 7% "rarely," and 5% "never."¹⁷⁶ The mean length of usage was about 3.5 years.¹⁷⁷

When asked to relate if their viewing of boy erotica redirected their sexual urges away from actual sexual contacts with boys, 49% reported that this was the case "invariably," 25% "usually," 10% "frequently," 8% "occasionally," 3% "rarely," and 5% "never."¹⁷⁸ Similarly, 39% reported that their viewing "invariably" had no effect on behavior and was used for entertainment purposes only, 29% "usually" had no effect, 13% "frequently," 9% "occasionally," 7% "rarely," and 3% "never" (i.e., about 10% always or nearly always experienced some behavioral effects).¹⁷⁹

Phrasing the question another way, respondents were asked if the use of erotica increased their tendencies for seeking out boys for sexual contacts. 60.5% related that this was "never" the case, 24.0% "rarely," 7.4% "occasionally," 4% "frequently," 2% "usually," and 2% "invariably."¹⁸⁰ Note that although the majority clearly deny that the use of erotica increased tendencies to seek out boys, a total of 39.5% indicated that this has occurred rarely or more often and 15.4% indicated that this has occurred occasionally or more often. However, these self-reported responses reflect the participants' own perceptions of their tendencies, not reports of actual molestation behavior. Alternatively, when asked if, and how often, boy erotica was used as a masturbatory aid, 64% indicated that they used it as a masturbatory aid "frequently," 25% "occasionally," 6% "rarely," and 5% "never."¹⁸¹ When asked if they used boy erotica to seduce boys, 6% responded "occasionally" or more frequently, 10% "rarely," 7% "once," and 77% "never."¹⁸² Again, it is worth noting that while a majority indicated that they have not used such child pornography to seduce children, 23% reported doing so at least once.

In another description of findings with a non-offender sample (at least comprised of those not known to have been convicted or charged with a sex crime), the investigators reported data from thirty-nine individuals who were

174. 276 of 290 respondents reported moderate-to-strong attractions to boys (measured on a six-point scale, where "1" indicates "Very strongly attracted to boys" and "6" indicates "Not attracted to boys"). *Id.*

175. *Id.*

176. *Id.*

177. *Id.* at 322.

178. *Id.*

179. *Id.*

180. *Id.*

181. *Id.*

182. *Id.*

assessed at an outpatient clinic due to concerns about their Internet use for sexual purposes.¹⁸³ 55% of these outpatients had downloaded child pornography, and 34% had attempted to meet a minor for sex.¹⁸⁴ It is not clear, however, from the information provided whether there was an association between pornography use and attempts to solicit minors for sex.

A related study looked at individuals who had been convicted of child pornography possession, but the sample was obtained in a rather unusual way.¹⁸⁵ When the owners of an international provider of child pornography were arrested, law enforcement was able to get access to the credit card numbers of many consumers. The researchers examined the characteristics of thirty-three such consumers of child pornography in the Swiss canton of Lucerne.¹⁸⁶ They examined police files and obtained personal statements from these men, focusing on criminological, psychosocial, and psychosexual data.¹⁸⁷ Although many of these men had not had any long-term intimate relationships, only one had a relevant criminal record.¹⁸⁸ The researchers concluded that although these men clearly had high levels of “deviant sexual fantasies,” this was not associated in this sample with actual “contact” crimes.¹⁸⁹

F. What factors distinguish those individuals most at risk for re-offending?

We now turn to some studies focusing on the prediction of recidivism among sexual offenders, including child molesters, apart from pornography usage. We do so for two purposes: First, we wish to note that, by and large, researchers have focused on risk factors other than pornography use (of any type). Second, when pornography use has been included in a predictive equation, it has been included in a relatively limited way.

To begin with, there have been a considerable number of studies examining variability in risk of re-offending for various crimes. For instance, established risk factors for re-offending in a wide range of crimes, including sexual offenses, are higher levels of employment instability, substance-abuse problems, pro-criminal attitudes, and antisocial personalities.¹⁹⁰ Karl Hanson and colleagues have more specifically examined the recidivist tendencies of sex offenders,

183. N.W. Galbreath, F.S. Berlin & D. Sawyer, *Paraphilias and the Internet*, in *SEX AND THE INTERNET: A GUIDEBOOK FOR CLINICIANS* 187, 187–205 (A. Cooper ed., 2002).

184. *Id.*

185. Andreas Frei, Nuray Erenay, Volker Dittmann & Marc Graf, *Paedophilia on the Internet – A Study of 33 Convicted Offenders in the Canton of Lucerne*, 135 *SWISS MED. WKLY.* 488 (2005), available at <http://www.smw.ch/docs/pdf200x/2005/33/smw-11095.PDF>.

186. *Id.*

187. *Id.*

188. *Id.*

189. *Id.*

190. R. Karl Hanson & Monique T. Bussière, *Predicting Relapse: A Meta-analysis of Sexual Offender Recidivism Studies*, 66 *J. CONSULTING & CLINICAL PSYCHOL.* 348 (1998).

including child sex offenders, in a series of studies.¹⁹¹ Hanson and Monique Bussière offered a comprehensive account of sex-offender risk profiles in their 1998 meta-analysis of the sex-offender recidivism literature.¹⁹² The single best predictor of sexual recidivism was sexual interest in children, as measured by penile response when viewing or listening to child sexual stimuli. The researchers found a 0.32 correlation between phallometrically assessed penile response to the presentation of child sexual stimuli and offender recidivism rates.¹⁹³ Other significant predictors of sexual offense recidivism included treatment dropout ($r = .17$), prior sexual offenses ($r = .19$), anti-sociality ($r = .14$), and having had boy victims ($r = .11$).¹⁹⁴ A more recent meta-analysis¹⁹⁵ showed that two factors, labeled “deviant sexual interests” and “antisocial orientation,” were the major predictors of recidivism among sexual offenders, whereas antisocial orientation was the only major predictor of recidivism among non-sexual offenders.¹⁹⁶ As noted earlier, other studies have also found support for the relationship between sexual recidivism and pedophilic interests.¹⁹⁷ The fact that deviant sexual interest has been identified as an important predictor of sexual offending (in combination with antisocial characteristics) suggests the possibility that, for some individuals, repeated use of child pornography may both reflect and reinforce pedophilic sexual desires.

There have also been research efforts that focused more specifically on child-pornography offenders in relation to other types of sexual offending. Particularly notable is Seto and Eke’s 2005 study of 201 child-pornography offenders.¹⁹⁸ Recall that in this study, Seto and Eke studied child-pornography

191. See R. Karl Hanson, Kelly E. Morton & Andrew J.R. Harris, *Sexual Offender Recidivism Risk: What We Know and What We Need to Know*, 989 ANNALS N.Y. ACADEMY SCI. 154 (2003).

192. See *id.* (citing Hanson & Bussière, *supra* note 190, at 348).

193. Hanson, Morton & Harris, *supra* note 191, at 157 tbl.1. As Seto indicated, recidivism in this context would “presumably but not necessarily involve[e] a child victim.” Seto, *supra* note 110, at 338.

194. Hanson, Morton & Harris, *supra* note 191, at 157 tbl.1. Victim empathy, degree of sexual contact, and being sexually abused as a child were among several factors found to be unrelated to sexual offense recidivism. *Id.* at 158 tbl.2.

195. R. Karl Hanson & Kelly E. Morton-Bourgon, *The Characteristics of Persistent Sexual Offenders: A Meta-Analysis of Recidivism Studies*, 73 J. CONSULTING & CLINICAL PSYCHOL. 1154, 1157 (2005).

196. *Id.* at 1157 & tbl.1.

197. See *id.* at 1154–55. In another study, the rates of sexual recidivism for the groups of offenders were as follows (average time at risk = 64 months): 60% for those high in psychopathy and high on the Screening Scale for Pedophilic Interests (SSPI), 21% for those low in psychopathy and low on the SSPI, 16% for those high in psychopathy and low on the SSPI, and 18% for offenders low in psychopathy and high on the SSPI. Michael C. Seto, Grant T. Harris, Mamie E. Rice & Howard E. Barbaree, *The Screening Scale for Pedophilic Interests Predicts Recidivism Among Adult Sex Offenders with Child Victims*, 33 ARCHIVES SEXUAL BEHAV. 455, 462 (2004). See also *supra* text accompanying notes 132–42.

198. See Seto & Eke, *supra* note 132, at 201.

offenders culled from a sex-offender registry.¹⁹⁹ Because registration requires the offender to record charges related to the current offense along with past criminal offenses, the researchers could analyze the relation between prior action and subsequent offending.²⁰⁰ The researchers were also able to incorporate additional criminological information into their analysis from a national database maintained on violent offenders, including sex offenders.²⁰¹ The most relevant analysis in this research divided offenders into three groups, according to their other criminal involvement.²⁰² The three groups consisted of 49 men with records of nonsexual offending in addition to their child pornography offending, 76 men with records of contact sexual offending²⁰³ in addition to their child pornography offending, and 76 men who had committed child pornography offenses only.²⁰⁴ This grouping revealed that child-pornography offenders who were also contact sexual offenders were more likely than the child pornography-only offenders to commit a new contact sexual offense in the 2.5-year follow-up period.²⁰⁵

These data therefore support the conclusion that the commission of child pornography offenses coupled with an act of molestation poses a greater risk than the commission of a child pornography offense alone, although the latter is a risk factor as well. However, this study does not enable a comparison between individuals who had committed only another contact offense with those who had committed another contact offense and a child pornography offense. Such a comparison could have perhaps more clearly indicated whether, above and beyond the commission of other offenses, child pornography offenses provide additional statistical prediction of later behavior.

Fortunately, this type of comparison was recently studied by Drew Kingston and his associates at the Department of Justice in Canada, who followed a sample of 584 adult male sexual offenders, of whom 84 were rapists and 500 were child molesters, over a fifteen-year period after they had been released from jail.²⁰⁶ Kingston, et al., examined whether use of non-deviant and deviant pornography (e.g., child pornography, nonconsenting pornography, bestiality, etc.) enabled better prediction of recidivism.²⁰⁷ They found that after controlling

199. *Id.*

200. *See id.* at 204.

201. *Id.*

202. *Id.* at 207.

203. Contact sexual offending involved actual physical contact between the offender and victim, while non-contact sexual offenses were defined to include child pornography, as well as offenses such as indecent exposure, soliciting prostitutes, or possession of obscene materials. *Id.* at 204-05.

204. *Id.* at 207.

205. *Id.* Child pornography offenders with a history of contact sexual offenses were also more likely than the others to commit new offenses in general, although there was no difference between groups in the commission of new child pornography offenses. *Id.*

206. Kingston, *supra* note 130.

207. *Id.*

for other relevant factors, including prior convictions, pornography use was a significant additional predictor of violent (including sexual) recidivism.²⁰⁸ More specifically, by the end of the fifteen-year follow-up period, 39% of the high-frequency pornography users had re-offended, as compared to 16% of the low-frequency users.²⁰⁹ Regarding the type of pornography, the researchers found that 37% of the offenders using deviant pornography had recidivated versus 24% of the non-deviant users.²¹⁰

G. Integrating the data

Taken altogether, the data reviewed in this section point to varying uses and effects of pornography for differing consumers. It is important here to keep in mind the distinction between pedophiles (individuals who are sexually aroused by children) and child molesters (individuals who commit acts of sexual molestation against children). To the extent that one can rely on offenders' self-reports, the data suggest that, for many pedophiles, pornography of various types is used as a masturbatory aid. Some of these individuals believe that such materials may have actually reduced their tendencies to engage in molesting behaviors, although a minority do report the materials cause increased tendencies.

For a considerable minority of child molesters and other offenders, however, pornography is used to "groom" children and to "whet the appetites" of molesters for engaging in offending behaviors. Here we see considerable evidence that, for some offenders, pornography is used for self-stimulation prior to committing a sex crime as well as during the crime. Although it is reported that adult pornography has often been associated with child molestation, this may be a function of two facts: that some child molesters are not primarily pedophilic in their sexual arousal patterns, and that the former type of pornography is legal, while the latter is not. One can certainly conjecture that if virtual child pornography that were indistinguishable from "real" images became legal and widely available, it would be more frequently used in the contexts described above than even "real" adult pornography currently is, due to its closer similarity to the child molester's acts.²¹¹

208. *Id.* As we describe later in this paper, this finding is highly consistent with the findings among noncriminals reported in Neil M. Malamuth, Tamara Addison & Mary Koss, *Pornography and Sexual Aggression: Are There Reliable Effects and Can We Understand Them?*, 11 ANN. REV. SEX RES. 26, 49 (2000).

209. Kingston, *Pornography Use*, *supra* note 130.

210. *Id.* Interestingly, although frequency and type of pornography use were clearly useful predictors of recidivism among offenders, overall there was actually less pornography use reported by offenders than a control group of non-offenders. This fits well with the overall conclusions (*see, e.g.*, Malamuth, Addison & Koss, *supra* note 208) that amount of pornography exposure is not by itself particularly revealing, but that amount of exposure, degree of influence on the person, and the risk profile of the individual are essential to consider.

211. As Berkowitz has shown, the degree of similarity between the images presented in media and the potentially affected behavior is one of the key dimensions affecting the extent to

For convicted sex offenders, sexual interest in children, as measured by penile response when viewing or listening to child sexual stimuli, emerged as a strong predictor of recidivism, as did deviant sexual preferences more generally. Heavy pornography use may be an indicator of a greater likelihood of recidivism, although the evidence here is somewhat mixed. While such pornography use may be interpreted as a symptom of "sexual compulsivity" rather than necessarily having a causal role in the strengthening of antisocial tendencies, the two processes are by no means mutually exclusive, and the frequent use of pornography, particularly of certain types, may both reflect and reinforce certain tendencies. It is valuable to recognize that child-pornography offenders without a history of contact sexual offending appear to differ reliably from other child-pornography offenders. While within both groups a substantial percentage indicated pedophilic interests, the former are much less likely to commit contact sexual offenses during follow-up observation periods.

IV.

RESEARCH ON LEGAL, NONCONSENTING, AND OTHER ADULT PORNOGRAPHY

A. Overview

While the limitations inherent to conducting research with child pornography are quite prohibitive, there is considerably more opportunity to conduct research on pornography that is currently legal. This is particularly true for studies that attempt to establish cause and effect by randomly assigning individuals to be exposed to certain types of pornography, sometimes repeatedly—a procedure that is not currently feasible with illegal child pornography.

Below, we summarize a research program that focuses particularly on the effects of nonconsenting adult pornography (often referred to as violent pornography, sexually aggressive pornography, or sexually aggressive media). With the increasing use of the Internet for access to pornography, the frequency and availability of such nonconsenting images have increased considerably.²¹² We suggest that research on the effects of such adult, nonconsenting pornography is relevant to the potential effects of child pornography. Child pornography (portraying real or virtual children) may also be considered a form of nonconsenting pornography, since a child under the age of consent can never legally consent

which media exposure may elicit behaviors. Leonard Berkowitz, *The Contagion of Violence: An S-R Medial Analysis of Some Effects of Observed Aggression*, 18 CURRENT THEORY & RES. MOTIVATION 95, 101–33 (1970). However, it may also be the case that knowing that a portrayal has been computer-generated may reduce its stimulatory potential, compared to the perception if it were "real."

212. See Martin Barron & Michael Kimmel, *Sexual Violence in Three Pornographic Media: Toward a Sociological Explanation*, 37 J. SEX. RES. 161, 164 (2000) (noting that Usenet contains statistically more-violent, less-consensual sex than magazines and videos).

to participate in such sexual acts, even if she is portrayed as aroused or responsive.²¹³ A similar point has been made by Suzanne Ost:

[W]ith regards to the content and themes of child pornography and because of the completely unequal relationship of power between adult and child, the child can only ever feature as a passive subject, exploited as a sexual object by the adult . . . [and] will always lack the capacity to consent to involvement in child pornography.²¹⁴

A broader question of the generalizability of any research findings, which is always at issue, pertains to the actual relevance of the nonconsenting adult-pornography research to virtual and real child pornography. Every study may be evaluated for internal and external validity. Internal validity refers to the extent to which researchers can conclude that the particular set of conditions actually studied (e.g., setting, participants, stimuli, etc.) have established a cause-and-effect relationship. External validity focuses on whether the conclusions reached in the particular study can be generalized elsewhere. One of the clear strengths of the research on the effects of nonconsenting adult pornography is a high degree of internal validity, since it has been feasible to assign participants randomly to varying conditions of exposure (including exposure to non-consenting pornography) and observe the effects of such exposure in controlled settings. Moreover, as described below, the conclusions of controlled studies high in internal validity have been consistent with the findings of studies examining similar associations in naturalistic settings.

Strictly speaking, it could be argued that the findings of any research study may be applicable only to the very particular conditions of that study—e.g., a group of 153 residents of Los Angeles who on a rainy day with a temperature of 73 degrees were exposed by a 5 ft., 11 inch, balding experimenter to a particular set of pornographic depictions featuring participants with specific characteristics in rooms with beige walls. Clearly, such literalness would render virtually all research useless for establishing its implications on social or legal policy. All research used in such policymaking requires generalizing research conclusions to other conditions where the same processes are likely to be operating in a similar way and to yield similar effects. Such generalizations must rely both on a

213. Interestingly, some of the clearest effects of adult sexual media on both sexual arousal stimulation and attitude changes have been found for portrayals not emphasizing “blood and gore” but showing women becoming sexually aroused as a result of sexual assault. See, e.g., Neil M. Malamuth & James V.P. Check, *The Effects of Aggressive Pornography on Beliefs in Rape Myths: Individual Differences*, 19 J. RES. PERSONALITY 299, 313–14 (1985); Neil M. Malamuth & James V.P. Check, *The Effects of Mass Media Exposure on Acceptance of Violence against Women: A Field Experiment*, 15 J. RES. PERSONALITY 436, 442 (1981); Neil M. Malamuth & James V.P. Check, *Penile Tumescence and Perceptual Responses to Rape as a Function of Victim’s Perceived Reactions*, 10 J. APPLIED SOC. PSYCHOL. 528, 542 (1980).

214. Suzanne Ost, *Children at Risk: Legal and Societal Perceptions of the Potential Threat That the Possession of Child Pornography Poses to Society*, 29 J.L. & SOC’Y 436, 455 (2002).

theoretical understanding of the underlying processes and on empirical verification, to the extent possible.²¹⁵

Although a full discussion of the theoretical and empirical bases justifying generalization from research on nonconsenting pornography to child pornography is beyond the scope of the present article, we present some theoretical and empirical examples. At the theoretical level, it is useful to consider some similarities between acts of sexual coercion against adults and acts of child sexual molestation and how pornography use might play a similar role in each.

A four-category framework for conceptualizing the factors affecting child sexual abuse²¹⁶ and adult sexual coercion²¹⁷ points to the possible role of pornography use in affecting each of these types of abusive behaviors.²¹⁸ Of particular relevance here are the first three categories, although we will briefly mention the fourth as well. The first category concerns motivation. To commit either type of act, a person typically has to want to do so by perceiving the consequences of the act as desirable or providing some gratification. Pornography portraying either sexual acts with children or the use of coercion in a sexual context as sexually gratifying and having positive valence may increase the desire to engage in certain sexually abusive acts. For example, as we discuss below, pornography's potential conditioning effects on sexual arousal as well as its role in generating sexual fantasies could increase motivation for committing abusive acts.

The next two categories involve inhibitory vs. disinhibitory mechanisms. Commonly, abusive sexual acts against children or adults are inhibited by both internal factors (e.g., a feeling that this act is morally wrong) and external factors (e.g., a fear of being punished). Pornography use could reduce both types of inhibitions, by changing perceptions of the consequences of such acts, the acceptance by others, and the potential external rewards and punishments. Our discussion below of research on the effects of pornography on attitudes accepting of rape myths and violence against women may be encompassed within this category.

Fourth, pornography use may affect the victim's ability to resist the sexual abuse or the coercion. Diana Russell argues, "Pornography is more often used to try to persuade a woman or child to engage in certain acts, to legitimize the

215. For a general discussion of such generalizability considerations, see Marilyn Brewer, *Research Design and Issues of Validity*, in HANDBOOK OF RESEARCH METHODS IN SOCIAL AND PERSONALITY PSYCHOLOGY 3 (Harry T. Reis & Charles M. Judd eds., 2000). For a discussion directly pertaining to human-sexuality research, see Bernard E. Whitley, Jr., *Validity in Research*, in HANDBOOK FOR CONDUCTING RESEARCH ON HUMAN SEXUALITY 51 (Michael W. Wiederman & Bernard E. Whitley eds., 2002).

216. See DAVID FINKELHOR, *CHILD SEXUAL ABUSE: NEW THEORY AND RESEARCH* (1984).

217. See Neil Malamuth, *Predictors of Naturalistic Sexual Aggression*, 50 J. PERSONALITY & SOC. PSYCHOL. 953 (1986); D.E.H. Russell, *Pornography and Rape: A Causal Model*, in MAKING VIOLENCE SEXY: FEMINIST RESEARCH ON PORNOGRAPHY 120 (D.E.H. Russell ed. 1993).

218. Neil Malamuth, *Sexually Violent Media, Thought Patterns and Antisocial Behavior*, in 2 PUBLIC COMMUNICATION AND BEHAVIOR 159 (G. Comstock ed. 1993).

acts, and to undermine their resistance, refusal, or disclosure of these acts.”²¹⁹ Some of the data described earlier regarding how some child molesters use pornography to “groom” children fall squarely within this category. Although Russell describes some findings suggesting that “sex calloused” males may use pornography to undermine a woman’s resistance,²²⁰ generally the data in this category relating pornography use for sexual coercion are quite limited and will not be discussed below.

An example of empirical research on nonconsenting pornography that may have implications for the study of child pornography is a study by Bogaert that examined the extent to which individual differences among undergraduate men predict preferences for and choices of various forms of sexual (e.g., erotic, female insatiability, nonconsenting adult pornography, or child pornography) and nonsexual (e.g., violent or nonviolent) media.²²¹ The individual difference variables used in this study were generally predictive of men’s preferences for particular types of pornography but were unrelated to their preferences for nonsexual media. Those males who particularly preferred nonconsenting (or sexually violent) adult pornography were males lower in intelligence and higher in dominance/hostility, impersonal-sex, and aggressive/antisocial tendencies.²²² Except for the intelligence variable, all of these profile characteristics were also found to predict individual differences in preferences for child pornography.²²³ In contrast, the same profile was not equally predictive of preference for other types of pornography.²²⁴ Although this research does not show that individuals who are particularly attracted to nonconsenting adult pornography are necessarily also attracted to child pornography, it does reveal a high degree of similarity between the underlying profile characteristics that determine attraction to both types of pornography.²²⁵

219. Russell, *supra* note 217, at 143.

220. *Id.*

221. Anthony F. Bogaert, *Personality, Individual Differences, and Preferences for the Sexual Media*, 30 ARCHIVES SEXUAL BEHAV. 29 (2001).

222. *Id.* at 45.

223. *Id.*

224. *Id.*

225. Courts must occasionally face generalizability questions and have proven willing to decide upon them. In a recent case relevant to the generalizability of pornography, the Canadian Supreme Court considered whether the findings of harm suggested by research on nonconsenting pornography using heterosexuals could be generalized to homosexuals as well. The Court decided that such generalization is appropriate. *Little Sisters Book & Art Emporium v. Canada*, [2000] 2 S.C.R. 1120 (Can.), available at <http://scc.lexum.umontreal.ca/en/2000/2000scc69/2000scc69.html>.

B. *Effects of exposure to pornography*

1. *Research framework*

As highlighted by Rutter,²²⁶ even the simplest causal relationship, such as the flick of a switch turning on a light bulb, requires a set of components to act in unison (in this example, the wiring must be intact, and the switch must produce a sufficient voltage). Consumption of pornography is not likely to “flip a switch” that creates sexually aggressive behavior unless a confluence of other factors have created the propensity for pornography potentially to do so. Malamuth and colleagues have long emphasized such a “confluence” approach to studying pornography generally and nonconsenting pornography in particular.²²⁷ For example, they noted that “only relatively modest associations would typically be expected between a single variable, such as media exposure, and a complex set of attitudes and/or behaviors that are undoubtedly related to the interactions of many factors.”²²⁸ However, even these modest statistical associations may reflect more-substantial associations among some individuals that may also have significant consequences for society.

Any model of individual propensity for sexual offending must consider both “risk factors,” which increase the risk of sexually offending behaviors, and “protective factors,” which reduce or eliminate the risk of such behaviors.²²⁹ Pornography use is only one of the many risk factors that must be considered within a broader research model of sexual offending. It is clear that the interaction among various risk and protective factors does not easily lend itself to a simple causative approach, but nevertheless, a practical predictive statistical model may be derived that has clear utility. Consequently, the effects of pornography are likely to differ among individuals as a function of various risk and protective factors. And for many purposes, one of the relevant questions may be whether the evidence supports the assertion that pornography use has predictive utility, after taking into account the role of other factors.

2. *Methodological considerations*

Although not as prohibitive as when studying child pornography, the difficulties in conducting research on the effects of other types of pornography are considerable nonetheless. From the exclusive perspective of research design, addressing the questions of scientific interest here would require a study in which young boys would be randomly assigned to be exposed or not exposed to various types of pornography over a formative period of years, and then their

226. MICHAEL RUTTER, GENES AND BEHAVIOR: NATURE-NURTURE INTERPLAY EXPLAINED 18 (2006).

227. *E.g.*, Malamuth, Addison & Koss, *supra* note 208, at 60–61.

228. *Id.* at 54.

229. *See* RUTTER, *supra* note 226, at 19–21.

later sexual aggression would be studied in natural settings. Obviously, ethical considerations preclude such a study.

Instead, a realistic research program requires putting together relevant pieces of research that are feasible to conduct. Consequently, some of the existing research has proceeded in two primary parts—the first part focusing on whether exposure to pornography may affect such factors as attitudes, sexual arousal patterns, and fantasies, and the second part assessing whether such factors as these are actually predictive of sexual aggression in naturalistic settings.²³⁰ This research supports the possibility that exposure to certain pornography may change important factors such as attitudes, arousal, and fantasies, and that these factors may in turn lead to changes in sexually aggressive behaviors. Research has also examined effects on less-extreme behaviors, such as domineeringness in conversation or the way a person votes as a member of a jury in a rape trial.²³¹ Although these latter types of changes may not necessarily be considered serious antisocial acts in and of themselves, they may affect the cultural climate that indirectly affects the likelihood of various antisocial acts such as sexual aggression.²³²

The methodology used to examine the “two parts” indicated above has itself primarily consisted of three types, each with certain advantages and disadvantages. First, there are studies that seek to find out if there may be causal effects of exposure to different types of pornography. Typically, such studies have randomly assigned participants to different conditions. The researchers then manipulate which type and/or how much pornography, if any, the participants in the various conditions are exposed to. These studies are referred to as experimental studies or experiments. Though usually conducted in laboratory environments, some relevant experiments have also been successfully completed in naturalistic settings. The value of such research is that it can determine cause and effect with confidence because, due to the random assignment of conditions, participants in the various conditions may be considered equal prior to their pornography exposure. Thus any differences found after different pornography exposure may be attributed to the differences in exposure content and amounts.

The second type of research consists of surveying people regarding how much and what type of pornography they have been exposed to in their daily lives. Researchers then attempt to correlate differences in usage with differences in attitudes and behaviors. These so-called “correlational studies” often use

230. There are also some studies that examine whether exposure under laboratory conditions to various types of pornography causes greater aggression, but these, of course, rely on the type of aggression that can be ethically measured (e.g., subjecting a confederate to aversive stimuli). Nevertheless, such laboratory assessments have been shown to relate quite well to sexual aggression in naturalistic settings. See, e.g., Craig A. Anderson, James J. Lindsay & Brad J. Bushman, *Research in the Psychological Laboratory: Truth or Triviality?*, 8 CURRENT DIRECTIONS IN PSYCHOL. SCI. 3 (1999).

231. See Malamuth, Addison & Koss, *supra* note 208.

232. *Id.*

statistical controls to attempt to rule out competing explanations of the associations of interest. Although in this type of research it is more difficult to identify causal connections with confidence, there is the advantage of studying people in their usual environments.

The third type of research has examined in various cultures how much pornography is being consumed in the society at large and how such consumption has changed over time. Such changes have then been correlated with other changes in the society, such as changes in sexual crimes. Although such research has provided an interesting window into varying cultures, there are several problems with such research, such as difficulties with inferring changes at the individual level from changes at the societal level. There are typically many other changes that have occurred in a society at the same time as changes in pornography consumption, making it difficult to relate changes in individual behavior to changes in macro-level pornography consumption.²³³

3. Hypothesized effects and research findings

A variety of potential adverse effects have been hypothesized to result from exposure to nonconsenting pornography. Here we summarize research in three areas. First, we briefly describe relevant research on the conditioning of sexual arousal patterns and on the priming of sexually coercive fantasies. Second, we consider effects on attitudes and behaviors summarized in meta-analyses. Finally, we summarize the important variances on the effects of pornography, based on differences among individuals.

a. Conditioning of sexual arousal and priming of sexually coercive fantasies

Researchers have investigated whether the linking of sex and violence in nonconsenting adult pornography might serve to condition greater sexual arousal on violence against women. Some research does indeed support the possibility that sexual arousal may become conditioned based on the pairing of such stimuli. For example, one study used systematic procedures, essential control comparisons, and direct physiological measures of sexual arousal to investigate the general possibility that sexual arousal may be conditioned as a function of exposure to various stimuli.²³⁴ The researchers repeatedly paired a previously neutral stimulus with sexually arousing material over three sessions held in three consecutive weeks. They found that, with such repeated pairing, young men's sexual arousal could be successfully conditioned on a previously neutral stim-

233. For a more extensive discussion of this issue, see Neil Malamuth & E. Pitpitan, *The Effects of Pornography are Moderated by Men's Sexual Aggression Risk*, in *PORNOGRAPHY: DRIVING THE DEMAND FOR INTERNATIONAL SEX TRAFFICKING* (D.E. Guinn ed., forthcoming).

234. Joseph J. Plaud & James R. Martini, *The Respondent Conditioning of Male Sexual Arousal*, 23 *BEHAV. MODIFICATION* 254 (1999).

ulus.²³⁵ Similar findings had been reported by Lalumière and Quinsey.²³⁶ Therefore, there is research support for the possibility that conditioning of sexual responses (as reflected in sexual arousal) may occur as a result of exposure to the pairing of sex and violence, which typically occurs in nonconsenting pornography.

Although this research suggests that sexual responses may be affected by exposure to nonconsenting pornography, there has also been some limited research conducted in naturalistic settings that did not find data to support such conditioning.²³⁷ Moreover, there is considerable evidence to suggest that sexual arousal patterns are well established before the age of eighteen; if conditioning effects on sexual arousal indeed occur, proper investigation of these would require research with individuals who are considerably younger. Due to legal and ethical considerations, such research is not feasible.

In one study, the effects of exposure to nonconsenting pornography on sexual fantasies were also examined in a laboratory setting.²³⁸ Research generally does suggest that such exposure may prime sexually coercive fantasies. In this study, effects particular to males already predisposed to be sexually aggressive were found.²³⁹ This result supports the idea that the effect of exposure to nonconsenting pornography is different and potentially more evocative of sexual aggression for males who already exhibit tendencies toward sexual aggression.

b. Effects on attitudes and behaviors summarized in meta-analyses

Most of the social scientific studies testing the proposed effects on attitudes and aggression have been summarized by Allen and associates in several meta-analyses.²⁴⁰ Meta-analyses are formalized, widely acceptable statistical

235. *Id.* at 266–67.

236. Martin L. Lalumière & Vernon L. Quinsey, *Pavlovian Conditioning of Sexual Interests in Human Males*, 27 ARCHIVES SEXUAL BEHAV. 241 (1998).

237. See, e.g., J. Ceniti & Neil Malamuth, *Effects of Repeated Exposure to Sexually Violent or Nonviolent Stimuli on Sexual Arousal to Rape and Nonrape Depictions*, 22 BEHAV. RES. THERAPY 535 (1984). It should be noted that this research did not involve actual systematic pairing of stimuli by the researchers as in the studies cited above. That is, the researchers did not systematically pair non-consent and sexual stimuli in terms of when and how they were presented, which may be important to finding conditioning effects over a relatively short period of time. Instead, participants were exposed over several weeks to a few commercially available non-consenting sexual depictions (e.g., books, movies, etc.) that were presented in their original form. The researchers assessed whether there were differences in the extent to which participants were sexually aroused before and after repeated exposure to this nonconsenting sexual material.

238. Neil Malamuth, *Rape Fantasies as a Function of Exposure to Violent Sexual Stimuli*, 10 ARCHIVES SEXUAL BEHAV. 33 (1981).

239. *Id.*

240. See Mike Allen, David D'Alessio & Tara M. Emmers-Sommer, *Reactions of Criminal Sexual Offenders to Pornography: A Meta-Analytic Summary*, 22 COMM. YEARBOOK 139 (1999); M. Allen, D. D'Alessio & K. Brezgel, *A Meta-Analysis Summarizing the Effects of Pornography II: Aggression After Exposure*, 22 HUMAN COMM. RES. 258 (1995); M. Allen, T.M. Emmers, L.

procedures for summarizing research across many studies. Two basic conclusions emerge. First, the data from both experimental and nonexperimental studies show a positive, albeit small-to-moderate, association between greater pornography consumption and sexually aggressive tendencies.²⁴¹ The results differed substantially depending on the type of pornography involved. There were stronger associations for nonconsenting than consenting pornography (although the latter still often showed a significant association). Second, similar conclusions emerged from experimental studies, which could presumably establish cause and effect, and nonexperimental studies, which examined correlations in naturalistic settings.²⁴²

c. Critical role of individual differences and aggressive behavior

Although the meta-analyses described above indicate that there is generally some association between consumption of pornography and sexual aggression against women²⁴³ and that the associations are typically stronger for non-consenting adult pornography than for other types of pornography, they do not speak to the issue of individual differences among consumers. Other studies, described below, have highlighted the associations' considerable dependence on

Gebhardt & M. Giery, *Exposure to Pornography and Acceptance of Rape Myths*, 45 J. COMM. 5 (1995).

241. Exposure to nonconsenting adult pornography was also seen to be reliably associated with laboratory measures of general aggression against women (e.g., administration of electric shock). See, e.g., Edward Donnerstein & Leonard Berkowitz, *Victim Reactions in Aggressive Erotic Films as a Factor in Violence Against Women*, 41 J. PERSONALITY & SOC. PSYCHOL. 710 (1981). Again, there has been considerable research supporting the validity of various laboratory measures of aggression as predictors of sexual aggression in nonlaboratory settings.

242. The one exception to these significant findings was Allen, D'Alessio, and Brezgal's meta-analysis on the relationship between pornography exposure and attitudes supporting violence against women (ASV) in nonexperimental studies. Allen, D'Alessio & Brezgel, *supra* note 240, at 258. Whereas these authors reported a significant association between both nonconsenting pornography and consenting pornography consumption and ASV in experimental studies, nonexperimental studies (reflecting associations in naturalistic settings) found no significant association. However, Malamuth, Hald, Pitpitan, Yuen, and Koss found several errors and problems with this latter meta-analysis (of associations in naturalistic settings), and after correcting for these and adding more-recent studies to the meta-analysis, they found a significant association with pornography use generally. N. Malamuth, G.M. Hald, E. Pitpitan, C. Yuen & M. Koss, *Pornography Consumption and Attitudes Supporting Violence: Revisiting the Relationship* (in preparation). Moreover, when they conducted a similar analysis with a random sample of the population of men in some form of post-high school education, they also found a significant association between amount of pornography consumption in naturalistic settings and ASV. *Id.* As highlighted below, see *infra* text accompanying notes 243–44, this correlation was more pronounced for certain men than for others.

243. We reiterate that correlations alone are not a basis for inferring causation but that they are examined here in the context of the overall patterning of the data, including studies that do enable causal inferences by virtue of randomly assigning participants to conditions. We also reiterate that generalizations in conclusions from such research to the potential effects of virtual child pornography are based on the extent to which converging evidence from various methodologies indicates a sound basis for inferring that certain processes or mechanisms in the research conditions are likely to occur in the use of virtual child pornography.

the type of person who consumes the pornography as well as the content of the material used. Individual differences, particularly those relating to antisocial or aggressive tendencies, plainly moderate the effects of nonconsenting pornography and contribute to differences in outcome measures of sexual arousal, attitudes, and fantasies.²⁴⁴ This is particularly clear for the findings pertaining to sexually aggressive behaviors. The research suggests that if a man already has relatively strong tendencies to be sexually aggressive towards women, then heavy pornography consumption may add fuel to the fire and increase his aggressive tendencies. This seems to be particularly likely if the type of pornography by which he is sexually aroused includes nonconsenting content. On the other hand, if a man has only a slight tendency toward sexual aggression against women, then whether he consumes pornography does not appear to significantly affect his risk for subsequent sexual aggression. In other words, this research suggests that the extent to which a person possesses certain combinations of risk factors determines how likely it is that there is a relationship between his pornography exposure and his sexual aggression.

We now consider the following question: does exposure to pornography enable additional prediction of sexual aggression, after controlling for other known risk factors? In other words, does pornography use in and of itself matter, or are observed relations between pornography use and sexual aggression in some sense illusory and merely the result of "guilt by association" with other variables, such as family violence or juvenile delinquency? These questions have been addressed by Malamuth, Addison, and Koss²⁴⁵ and Vega and Malamuth²⁴⁶ under various types of statistical analyses. For example, Malamuth, et al., found that after controlling for key risk factors (e.g., family violence, delinquency, attitudes accepting of violence, impersonal sex, and hostile masculinity), consumption of pornography remained a significant predictor of sexually aggressive behaviors.²⁴⁷ Similarly, Vega and Malamuth inserted pornography use into a predictive equation along with other risk factors used by Malamuth, et al., but also measured general antisocial tendencies (e.g., impulsivity, grandiosity, and irritability).²⁴⁸ Here as well, a predictive role for pornography use in the commission of sexual aggression was evident even after taking the other risk factors into consideration.²⁴⁹ Carr and VanDeusen also found that pornography use, assessed by various types of media, was an important risk factor predicting sexual aggression after controlling for other

244. See, e.g., Neil Malamuth & Mark Huppin, *Pornography and Teenagers: The Importance of Individual Differences*, 16 ADOLESCENT MED. 315 (2005). See also Malamuth & Pitpitan, *supra* note 233.

245. Malamuth, Addison & Koss, *supra* note 208.

246. V. Vega & N.M. Malamuth, *Predicting Sexual Aggression: The Role of Pornography in the Context of General and Specific Risk Factors*, 33 AGGRESSIVE BEHAV. 104 (2007).

247. Malamuth, Addison & Koss, *supra* note 208.

248. Vega & Malamuth, *supra* note 246.

249. *Id.*

factors, such as alcohol use, attitudes accepting of violence, and sexual victimization as a child.²⁵⁰

The research summarized above, providing varying degrees of support for the causal effects of exposure to certain types of pornography, has been integrated within a framework that emphasizes the confluence of two major constellations of characteristics on sexual aggression, labeled Impersonal Sex and Hostile Masculinity.²⁵¹ These two constellations are similar to those described in research on sexual offenders that emphasizes Sexual Deviance and Antisociality.²⁵² Both of these lines of research, using samples of nonoffenders and offenders, support the idea that individuals who have relatively high antisocial tendencies and an orientation to sex that leans towards preferring certain non-normative sexual acts (e.g., in the case of pedophiles, an attraction to children; in the case of potential sexual aggressors, an attraction to impersonal sexuality) may be adversely affected by repeated exposure to certain types of pornography.²⁵³ The research described above, supporting bidirectional causal associations (i.e., men with certain predispositions seek out certain types of pornography that then strengthen those tendencies), shows that nonconsenting pornography may under some circumstances increase the likelihood of offending behaviors. Particularly for individuals with relatively low self-control and high impulsivity (characteristics correlated with Hostile Masculinity and Antisociality), exposure to some types of pornography may have “tipping points,” reinforcing effects that move pre-existing tendencies beyond a threshold necessary to elicit actual offending behavior. Various investigators, even those considered critical of some of the research demonstrating effects of pornography exposure, have acknowledged such effects.²⁵⁴

250. Joetta L. Carr & Karen M. VanDeusen, *Risk Factors for Male Sexual Aggression on College Campuses*, 19 J. FAM. VIOLENCE 279 (2004).

251. See Neil M. Malamuth, Daniel Linz, Christopher L. Heavey, Gordon Barnes & Michele Acker, *Using the Confluence Model of Sexual Aggression to Predict Men's Conflict with Women: A 10-Year Follow-Up Study*, 69 J. PERSONALITY & SOC. PSYCHOL. 353, 353 (1995).

252. See, e.g., Martin L. Lalumière & Vernon L. Quinsey, *Sexual Deviance, Antisociality, Mating Effort, and the Use of Sexually Coercive Behaviors*, 21 PERSONALITY & INDIVIDUAL DIFFERENCES 33 (1996).

253. In interviews with convicted rapists, rape has been described as an exciting form of recreational sex because of the power of the assailant over his victim. See Diana Scully & Joseph Marolla, *“Riding the Bull at Gilley's”*: *Convicted Rapists Describe the Rewards of Rape*, 32 SOC. PROBLEMS 251 (1985). Also, research involving a large sample of men and women from the general population reveals that high levels of impersonal sex were related to various undesirable characteristics, including separation from parents during childhood, relationship instability, and dissatisfaction with life in general. See Niklas Långström & Karl R. Hanson, *High Rates of Sexual Behavior in the General Population: Correlates and Predictors*, 35 ARCHIVES SEXUAL BEHAV. 37 (2006).

254. See, e.g., Neil M. Malamuth & John Briere, *Sexual Violence in the Media: Indirect Effects on Aggression Against Women*, 42 J. SOC. ISSUES 75 (1986). See also William A. Fisher & Azy Barak, *Online Sex Shops: Phenomenological, Psychological, and Ideological Perspectives on Internet Sexuality*, 3 CYBERPSYCHOL. & BEHAV. 575 (2000).

C. Summary and conclusions from research on nonconsenting and other adult pornography

The research we have summarized here on adult pornography shows a high degree of convergence between experiments in controlled settings and correlational findings in naturalistic settings. The research suggests that those individuals who are relatively high in risk characteristics, such as antisociality and hostility toward women, are more likely to choose to be exposed to nonconsenting pornography and to be sexually aroused by it. Not only are they more likely to be exposed to such media, but when they are exposed, they are likely to be changed by such exposure—for example, in their attitudes about the acceptance of violence against women. As well, research indicates that such high-risk individuals are the ones upon whom pornography use makes the clearest difference in whether they are actually sexually aggressive or not.

As we have repeatedly emphasized, it is unlikely that in and of itself any type of pornography exerts wide-sweeping changes on large numbers of people, but as summarized in the consensus statement of the social scientists taking part in a Surgeon General's Workshop, "Pornography does have effects; it is just not yet known how widespread or powerful they really are."²⁵⁵ As discussed, it may likely be that pornography's effects are important for some individuals but not for others, and that they may prime behaviors only as they interact with certain other risk factors.²⁵⁶ Also likely to be significant are processes involving activation or priming of what is already brought by the person to a situation and strengthening of existing tendencies in ways that may create tipping-point effects on behaviors if other risk factors are also present. As Malamuth, et al., speculated:

Associations between pornography consumption and aggressiveness toward women could be explained by a circular relationship between high coercive tendencies and interest in certain content in pornography, whereby aggressive men are drawn to the images in pornography that reinforce and thereby increase the likelihood of their controlling, impersonal, and hostile orientation to sexuality. The way relatively aggressive men interpret and react to the same pornography may differ from that of nonaggressive men.²⁵⁷

255. E.P. MULVEY & J.L. HAUGAARD, OFFICE OF THE SURGEON GENERAL, U.S. DEP'T OF HEALTH & HUMAN SERVICES, REPORT OF THE SURGEON GENERAL'S WORKSHOP ON PORNOGRAPHY AND PUBLIC HEALTH 19 (1986).

256. This may be particularly so among adolescent populations, whose attitudes and behaviors are more ambiguously defined than those of adults and among whom organizing effects of pornography exposure may be more significant in reinforcing developing constellations of personality characteristics. This proposition fits with the emphasis in social learning theory on the concept of reciprocal determinism, defined as "a continuous reciprocal interaction between personal, behavioral, and environmental determinants." See ALBERT BANDURA, SOCIAL LEARNING THEORY 194 (1977).

257. Malamuth, Addison & Koss, *supra* note 208, at 85.

In some cases, these reactions may be manifested in actual aggression. In many other cases, these effects may “only” be found in expressed social attitudes, interpersonal domineeringness, or similar constructs.²⁵⁸

D. What about the possibility of cathartic effects?

In contrast to the type of “increased likelihood of offending” effects suggested above, it may also be useful to consider the possibility of a cathartic impact resulting from the production and/or consumption of nonconsenting-adult and other types of pornography. Although many people find this theory intuitively appealing and, as discussed below, potentially applicable for some pedophiles, in other areas of media research where this hypothesis has been extensively tested, it has not been supported. Indeed, the contrast between people’s persistent beliefs in a catharsis effect and the research findings has actually become a related area of scientific research.

Researchers have considered the possibility that perhaps there are a limited set of conditions in which a catharsis effect on behavior does occur, such as for individuals who believe in catharsis. For example, Brad Bushman and associates conducted two experiments that sought to examine whether there might be some empirical support for a catharsis effect when people were encouraged to believe in it and to act on that belief.²⁵⁹ In the first study, the authors found that participants who read a pro-catharsis message (claiming that aggressive action is a good way to relax and reduce anger) subsequently expressed a greater desire to hit a punching bag than did participants who read an anti-catharsis message. In the second study, participants read the same messages and then actually did hit a punching bag. This exercise was followed by an opportunity to engage in laboratory aggression. Contrary to the catharsis hypothesis and the self-fulfilling-prophecy prediction, people who read the pro-catharsis message and then hit the punching bag were subsequently more, rather than less, aggressive in the laboratory assessment than those who read the anti-catharsis message.

It is useful to distinguish, however, between catharsis in the sense of reducing the likelihood of child molestation as a function of exposure to child

258. There have also been some claims of failures to replicate some of the effects reported in terms of changes in attitudes and behaviors. In particular, William Fisher and Guy Grenier reported that male undergraduates exposed to nonconsenting pornographic stimuli did not change their general attitudes towards women or their levels of aggression towards a female confederate. Fisher & Grenier, *supra* note 125. This research can hardly be considered a legitimate attempt at replication and suffers from some very serious methodological problems. Nevertheless, it is noteworthy that Fisher, the primary investigator in the research ostensibly failing to find an effect, has in a more recent paper written with Azy Barak asserted various negative effects of exposure to pornography once individual differences are taken into consideration. See Fisher & Barak, *supra* note 254, at 586–87.

259. Brad J. Bushman, Roy F. Baumeister & Angela D. Stack, *Catharsis, Aggression and Persuasive Influence: Self-fulfilling or Self-defeating Prophecies*, 76 J. PERSONALITY & SOC. PSYCHOL., 367, 367–374 (1999).

pornography²⁶⁰ versus the potential reduction in need for (and therefore the production of) pornography that portrays actual children. Although there is little actual evidence at this time to support the former possibility,²⁶¹ it is certainly possible that pedophiles who use child pornography to become sexually aroused and as masturbatory material, but do not actually molest children, would be less likely to seek out real child pornography if virtual pornography were largely indistinguishable from the real images. A similar point was made by the Court in *Ashcroft*, alluding to the potential for virtual imagery to drive live child pornography from the market.²⁶²

V.

A NEW APPROACH TO VIRTUAL CHILD PORNOGRAPHY

Because First Amendment rights of access to virtual child pornography were at issue in *Ashcroft*, the case triggered strict scrutiny analysis.²⁶³ This implicitly

260. We do recognize the fact that masturbation often occurs with the use of pornography and may temporarily reduce tension. This suggests the possibility of effects different from those studied with anger and aggression. More research on this possibility is clearly needed in this area.

261. *But see* Carlin Meyer, *Reclaiming Sex from the Pornographers: Cybersexual Possibilities*, 83 GEO. L.J. 1969, 1999–2000 (1995) (“Moreover, it is not clear that the pedophiles and fetishists who indulge their tastes on the Internet, or those who merely indulge their curiosity or sexual pleasure in viewing such taboo imagery, thereby become more harmful to society: the opposite conclusion is more logical. Easy access to private viewing in circumstances in which masturbatory fantasy can be indulged is as likely to alleviate the need or desire to pursue actual children as it is to encourage taking action in real space rather than cyberspace. Experience from computer games suggests that such games decrease, not increase, other forms of social activity.”) In our view, Meyer confuses various arguments and effects, selectively reviews the available research, and therefore arrives at misleading conclusions. For example, experience with computer or video games might actually lead to an increase in other forms of social activity. For a summary of the myths and facts regarding violent video games, see Craig A. Anderson, *Violent Video Games: Myths, Facts and Unanswered Questions*, AM. PSYCHOL. ASS’N ONLINE: PSYCHOL. SCI. AGENDA, available at <http://www.apa.org/since/psa/sb-anderson.html>. For a more detailed review of the literature on video games, see CRAIG A. ANDERSON, DOUGLAS A. GENTILE & KATHERINE E. BUCKLEY, *Violent Video Game Effects on Children and Adolescents: Theory, Research, and Public Policy* (2007). For a discussion of such research in the context of research on media violence generally, see Craig A. Anderson, Leonard Berkowitz, Edward Donnerstein, L. Rowell Huesmann, James D. Johnson, Daniel Linz, Neil M. Malamuth & Ellen Wartella, *The Influence of Media Violence on Youth*, 4 PSYCHOL. SCI. IN PUB. INT. 81 (2003).

262. Justice Kennedy’s majority opinion states in relevant part:

The Government next argues that its objective of eliminating the market for pornography produced using real children necessitates a prohibition on virtual images as well. Virtual images, the Government contends, are indistinguishable from real ones; they are part of the same market and are often exchanged. In this way, it is said, virtual images promote the trafficking in works produced through the exploitation of real children. The hypothesis is somewhat implausible. If virtual images were identical to illegal child pornography, the illegal images would be driven from the market by the indistinguishable substitutes. Few pornographers would risk prosecution by abusing real children if fictional, computerized images would suffice.

Ashcroft v. Free Speech Coalition, 535 U.S. 234, 254 (2002).

263. *Ashcroft*, 535 U.S. at 244 (referring to “significant protection from overbroad laws that chill speech within the First Amendment’s vast and privileged sphere” but not using the term

required, though the Court did not explicitly state so, that the CPPA be narrowly tailored to serve compelling governmental interests, a constitutional standard not met by the statute. Accordingly, Justice Kennedy's majority opinion declined to uphold the ban on virtual child pornography, citing definitional vagaries (e.g., statutory language proscribing images that "appear to be" of minors engaging in sexually explicit conduct)²⁶⁴ and the weak connection demonstrated by Congress between viewing child pornography and subsequent pedophilic conduct.²⁶⁵ The PROTECT Act of 2003 attempted to resolve constitutional overbreadth concerns by confining the statutory definition of child pornography to reach only imagery "that is, or is indistinguishable from, that of a minor engaging in sexually explicit conduct"²⁶⁶ Nevertheless, the PROTECT Act fails to address the contingent nature of harms decried by the majority opinion in *Ashcroft*.²⁶⁷

In this part we suggest that to survive constitutional challenge, federal legislation should be modified to outlaw the possession of virtual child pornography only by convicted sex offenders. As we showed in Part III, evidence does not support the proposition that there is a strong connection between being a child pornography offender and committing sexual molestation.²⁶⁸ What does seem to be the case, however, is that if a person has committed a child sex offense, then the use of pornography may constitute an additional risk factor for re-offending.²⁶⁹ This conclusion is consistent with the research on convicted child sex offenders reviewed in Part III. It is also consistent with the research on the relationship between pornography and sexual aggression in adults, reviewed in Part IV. Both scientific literatures support the conclusion that for someone at relatively low risk for offending, there is little if any connection between pornography use and aggression. In contrast, for someone at relatively high risk for re-offending, there is a reliable association between pornography use and aggression. This strong theoretical rationale justifies restricting the use of virtual child pornography by child molesters. Accordingly, federal legislation tailored to reach only convicted child sex offenders would be constituted to serve governmental interests of "surpassing importance" in protecting children from harms of abuse²⁷⁰ and following various rough iterations would be prepared to do so in the least restrictive manner.

"strict scrutiny").

264. *Ashcroft*, 535 U.S. at 246. See also 18 U.S.C. § 2256(8)(B) (1996).

265. *Ashcroft*, 535 U.S. at 253–54.

266. PROTECT Act at § 502(a)(1), 117 Stat. at 678 (codified at 18 U.S.C. § 2256(8)(B)). As one commentator explains, "Although 'indistinguishable from' supposes that one cannot perceive a difference, 'appears to be' suggests that one can, only need not." Kornegay, *supra* note 42, at 2150–51.

267. The proposed affirmative defense of the PROTECT Act comes with its own set of constitutional questions as well. See *Ashcroft*, 535 U.S. at 256; Kornegay, *supra* note 42, at 2156.

268. See, e.g., Seto & Eke, *supra* note 132, at 208.

269. *Id.* at 207.

270. See *New York v. Ferber*, 458 U.S. 747, 757 (1982) ("The prevention of sexual exploitation and abuse of children constitutes a government objective of surpassing importance.")

A. *Justifying differential treatment for convicted sex offenders:
the Robinson doctrine*

Importantly, in recommending that one's standing as a sex offender justify criminalizing that person's possession of virtual child pornography, we must not run afoul of the Eighth Amendment. In this regard, a long-standing constitutional principle, commonly known as the *Robinson* doctrine, proclaims that effectively criminalizing a person's status as a member of a group violates the Eighth Amendment's prohibition against cruel and unusual punishment.²⁷¹ In *Robinson v. California*, the Supreme Court struck down a California statute that made mere addiction to narcotics unlawful, or, put another way, that criminalized a person's very status as a drug addict.²⁷² Because the California statute required no illegal act to trigger a statutory violation, the Court held the law to be tantamount to cruel and unusual punishment.²⁷³

The *Robinson* doctrine is distinguishable from punishment for conduct, as opposed to punishment for status alone.²⁷⁴ That distinction was first made in *Powell v. Texas*, where the Court justified a prohibition against public intoxication by explaining that Powell, who had been convicted under the statute, had not been punished for his status as an alcoholic but for acts undertaken pursuant to that status (i.e., drinking and wandering through streets in public).²⁷⁵ In the words of the Court:

The entire thrust of Robinson's interpretation of the Cruel and Unusual Punishment Clause is that criminal penalties may be inflicted only if the accused has committed some act, has engaged in some behavior, which society has an interest in preventing, or perhaps in historical common law terms, has committed some actus reus.²⁷⁶

The *Robinson* doctrine has already been considered in the context of child pornography in the case of *United States v. Black*.²⁷⁷ Black was the target of an FBI sting that discovered him to be in possession of scores of photographs of children engaged in sexually explicit conduct.²⁷⁸ In court, both parties agreed to stipulate that Black was a pedophile who collected child pornography "as a pathological symptom of [his] pedophilia."²⁷⁹ As such, Black argued that his

271. See U.S. CONST. amend. VIII; *Robinson v. California*, 370 U.S. 660, 667 (1962). *But see Powell v. Texas*, 392 U.S. 514, 533 (1968) (upholding conviction for public drunkenness defendant who was in part compelled to drink).

272. *Robinson*, 370 U.S. at 667.

273. *Id.*

274. See *id.* at 664.

275. *Powell*, 392 U.S. at 532.

276. *Id.* at 533.

277. *United States v. Black*, 116 F.3d 198 (7th Cir. 1997).

278. *Id.* at 200.

279. *Id.*

indictment violated the Eighth Amendment, as a status-based punishment.²⁸⁰ The court disagreed. Absent proof that Black was unable to appreciate the nature, quality, and wrongfulness of his acts (i.e., that his actions were involuntary), the Seventh Circuit ruled that the indictment had issued from Black's conduct in violating child pornography laws and not simply from his status as a pedophile.²⁸¹

Similarly, in the present context we do not recommend that the status of being a convicted sex offender carry with it any obligatory penalty. Rather, in light of the substantive risks to children involved, we recommend that the affirmative act of possessing virtual child pornography expose the convicted sex offender to criminal penalty. In contrast to the type of laws most commonly challenged under the *Robinson* doctrine—i.e., those that create scenarios in which it becomes impossible for alcoholics or homeless people to abide by the law (e.g., laws that criminalize sleeping in public places)²⁸²—the classification suggested here targets not innocent but culpable conduct.

*B. Justifying differential treatment for sex offenders:
the lesson of Stanley v. Georgia*

In the infamous case of *Stanley v. Georgia*, the Supreme Court held that a state could not ban “mere private possession” of obscene materials.²⁸³ Because it is otherwise a crime to supply obscene materials to consenting individuals (e.g., the mailing of obscene materials is illegal,²⁸⁴ as is the theatrical showing of obscene films²⁸⁵), *Stanley* can be viewed as a somewhat curious decision. In reaching its decision, however, the *Stanley* Court fairly assessed the weakness of the State's asserted right “to protect the individual's mind from the effects of obscenity” as against the countervailing strength of individual privacy interests.²⁸⁶ The Court concluded that a state has no business telling a man what to think in the privacy of his home.²⁸⁷

Georgia had contended in *Stanley* that criminalizing private possession of obscenity was necessary to reduce associated sexual offending. Disagreeing, the Court in *Stanley* scrutinized Georgia's position as follows:

. . . Georgia asserts that exposure to obscene materials may lead to deviant sexual behavior or crimes of sexual violence. There appears to

280. *Id.*

281. *Id.* at 201.

282. See Benno Weisberg, *When Punishing Innocent Conduct Violates the Eighth Amendment: Applying the Robinson Doctrine to Homelessness and Other Contextual “Crimes”*, 96 J. CRIM. L. & CRIMINOLOGY 329, 330 (2005).

283. *Stanley v. Georgia*, 394 U.S. 557, 559 (1969).

284. *U.S. v. Reidel*, 402 U.S. 351, 352 (1971).

285. *Paris Adult Theatre I v. Slaton*, 413 U.S. 49, 57 (1973).

286. *Stanley*, 394 U.S. at 565.

287. *Id.* at 566.

be little empirical basis for that assertion. . . . Given the present state of knowledge, the State may no more prohibit mere possession of obscene matter on the ground that it may lead to antisocial conduct than it may prohibit possession of chemistry books on the ground that they may lead to the manufacture of homemade spirits.²⁸⁸

Two points are relevant here. On the one hand, Georgia's rationale in *Stanley* is jarringly reminiscent of the thrust of Congressional testimony before the Court in *Ashcroft*, regarding the ills of virtual child pornography. On the other hand, we should note that a ban against virtual child pornography, if limited to criminalizing possession in the hands of convicted sex offenders, would rest on an empirical record of far greater pedigree than that presented in either *Stanley* or *Ashcroft*. In this regard, not only is *Stanley* not controlling for our proposed constitutional framework, but implicit in *Stanley* is the suggestion that under a more substantial investigational record, the interests of the government might have carried the verdict.

VI.

SUMMARY AND CONCLUSIONS

A. Summary of research evidence

1. Methodological limitations and convergence

The most desirable and direct scientific evidence examining the effects of virtual child pornography on pedophiles is unlikely ever to be available, due to ethical and legal prohibitions against conducting such research. The best one can hope for is a convergence of results emanating from studies using differing methodologies that in and of themselves may be less than ideal, but taken together suggest aggregate conclusions. This may be analogous in some respects to a legal case based on circumstantial evidence that may sum to create a relatively strong case although each piece of evidence is far from compelling in itself.

2. Comparisons among groups of offenders and non-offenders

Some studies of pornographic stimuli involve comparisons among groups of individuals. Examining the potential association between the use of virtual child pornography and actual acts of child molestation is necessarily complicated by the heterogeneity of the various relevant groups compared. Even those who meet the clinical definition for pedophilia (i.e., recurrent, intense interest in prepubescent children) are a heterogeneous group of people, many of whom have not committed any acts of child molestation and may never do so. In

288. *Id.* at 566–67.

addition, some child molesters do not have pedophilic interests but molest children because children are vulnerable sexual targets. Some individuals who commit acts of sexual molestation are “non-specialists” who have committed various forms of antisocial behavior, including sexual coercion and non-sexual crimes. Possession of child pornography has been found to be a valid indicator of pedophilia to a greater extent than child molestation in and of itself, probably because a considerable number of child molesters are merely opportunistic, whereas individuals who seek out child pornography are particularly likely to be pedophiles. Being a pedophile does raise the risk for sexual offending against children, with about 40–50% of adult offenders meeting the diagnostic classification of pedophilia. However, we do not know what percentage of pedophiles have actually molested children, although it can safely be said that some pedophiles are responsible for large numbers of offenses.²⁸⁹

In examining experiences during childhood and adolescence, some research reveals that child molesters have had more exposure to pornography generally than other comparison groups. In addition, research with other types of sexual offenders, such as rapists, indicates that they report being more influenced by pornography than other groups of offenders, although this has not been specifically examined among child molesters.

In terms of current use, child molesters have been found to use various types of pornography (including but not limited to child pornography) more often than other comparison groups. Some molesters (21% in one study) have specifically reported using pornography as a disinhibition method prior to committing child sexual abuse.²⁹⁰ Further, in various studies, about one-quarter to one-half of individuals convicted of child-pornography possession have been charged with a child sexual molestation offense as well. Moreover, child-pornography use adds to the prediction of likelihood of re-offense for those who have previously molested children. However, individuals with a history of child pornography possession offenses only are not likely to commit a contact sexual offense. This suggests a clear difference between individuals who have a history of both offending and possessing child pornography, as compared to individuals who use child pornography but have no known history of committing child molestation. Taken together, the data derived from studying pedophiles and child molesters (using criminal records and self-reports) point to rather different uses and effects of pornography for different consumers. For many pedophiles who are not child molesters, child pornography is used as a masturbatory aid only. For a considerable minority of child molesters, in contrast, pornography (including but not necessarily limited to child pornography) does appear to be used to “whet their appetites” and to “groom” children for abuse.

289. See M. Ashley Ames & David A. Houston, *Legal, Social, and Biological Definitions of Pedophilia*, 19 ARCHIVES SEXUAL BEHAV. 333, 337 (1990).

290. Elliott, Browne & Kilcoyne, *supra* note 163, at 582.

3. Research on nonconsenting pornography with men from the general population

A completely independent line of research has focused on the effects of exposure to nonconsenting adult pornography on sexual arousal, fantasies, attitudes, and aggressive behavior in the laboratory and in naturalistic settings. One advantage of this research is the ability to assign participants randomly to conditions and thereby establish cause and effect with confidence. Another advantage is that the research has generally been conducted with non-forensic populations, who typically provide more reliable self-reports than forensic samples. Moreover, much of the data do not rely solely on self-reporting, but includes multiple methods (e.g., physiological measures and actual observations of aggressive behavior in laboratory settings). It is also noteworthy that findings obtained in controlled settings using random assignment to conditions have generally been well supported by other studies examining models of risk for sexual aggression in naturalistic settings. This line of research consistently suggests that for those individuals who are relatively high in risk characteristics for committing sexual aggression, frequent exposure to nonconsenting pornography may add “fuel to the fire” and increase the risk for committing sexually coercive acts. However, the same studies do not reveal increased risk as a function of exposure to nonconsenting pornography for men with a pre-existing low risk profile for committing sexual aggression.

The disadvantages of this line of research, for purposes of this article, are that the stimuli used are not identical to those we have in question (i.e., virtual child pornography) and that the individuals studied are not known to have committed acts of child molestation. We believe, however, that evidence that exposure to this type of nonconsenting pornography can change responses such as sexual attitudes and behaviors is relevant to the question of whether another type of nonconsenting pornography (e.g., child pornography, which by definition may also be considered a type of nonconsenting pornography) is likely to have similar effects.

4. Complementary lines of research yield similar conclusions

Taken together, the two lines of independent lines of research (one focusing primarily on groups of offenders, the other primarily studying non-forensic samples with varying degrees of risk profiles) complement each other very well by their strengths and limitations. Importantly, the two lines of research support similar conclusions: exposure to nonconsenting pornography (child or adult) can “whet the appetite” or “add fuel to the fire” for individuals with a relatively high risk for offending (revealed either by a previous conviction for offending or by scoring highly on risk factors for sexual aggression). On the other hand, individuals with low known risk for sexual offending (revealed either by lack of previous behavioral offenses or by scoring low on risk factors) do not show any

evidence of increased risk for sexual offending as a result of exposure to such pornography.

B. Implications for legal policy

In the final analysis, where governmental paternalism exists at odds with individual rights, a balance must always be struck between competing interests. In the case of a proposed ban against private possession of virtual child pornography, First Amendment interests dictate that we give every consideration to time-honored solutions of “education and punishment for violations of the law”²⁹¹ before adopting what amounts to government-sponsored censorship, even granting the questionable value of virtual child pornography in the marketplace of ideas. At the same time, any proposed ban need lie on a strong empirical foundation and steer clear of the corrupting sway of moral, socio-political, and affective ideological undercurrents. As one commentator has keenly observed:

Although deep-seated moral reactions to proposals to ban hate speech and pornography may be in play more than we recognize, the practical consequences of such proposals . . . remain crucial. Difficult though it may be, it is important to try to make these empirical assessments as free as possible from the distorting influence of deeply held preconceptions.²⁹²

We recognize, of course, that legal policy may be shaped by many considerations other than research findings. We also recognize the limitations of the available data, including the lack of available evidence on many questions relevant to the availability of virtual child pornography (e.g., how likely children are to be exposed to virtual child pornography, and the likely effects on children of exposure to virtual child pornography on the Internet). Nevertheless, we believe that the research reviewed here can help guide legal policy in this area. If legal policy were to be directly informed by the available scientific research, we believe that there is a convergence of findings from various sources to suggest that restrictions of virtual child pornography should take into consideration a person’s prior offense history. Both research with child molesters²⁹³ and with men from the general population²⁹⁴ support prohibiting the possession and use of virtual child pornography by those already convicted of child sexual

291. See *Whitney v. California*, 274 U.S. 357, 378 (1927) (Brandeis, J., concurring).

292. JAMES WEINSTEIN, *HATE SPEECH, PORNOGRAPHY, AND THE RADICAL ATTACK ON THE FREE SPEECH DOCTRINE* 187 (1999).

293. See Kingston, Fedoroff, Firestone, Curry & Bradford, *supra* note 130 (showing that recidivism over a fifteen-year period is predicted by the use of pornography, after controlling for other predictors, with “deviant pornography” appearing to have a stronger association with recidivism than “non-deviant” pornography has).

294. See Malamuth, Addison & Koss, *supra* note 208; Vega & Malamuth, *supra* note 246 (indicating that pornography use, after controlling for other risk factors, was a strong predictor of sexual aggression for men with a high-risk profile but not for other men).

molestation. Such restrictions are also consistent with previous legal practice that has severely restricted the rights of individuals convicted of criminal acts, with the unique treatment of propensity evidence in child molestation cases, and with laws aimed at preempting recidivist tendencies of previously convicted child sex offenders. In contrast, studies show little demonstrable risk for other individuals (including child-pornography offenders without a history of contact sexual offending) to commit future molestation pursuant to pornography consumption, and the data therefore do not at present support blanket prohibitions against the use of virtual child pornography.

