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## A CRITIQUE OF THE ANTI-PORNOGRAPHY SYLLOGISM

GEORGE C. THOMAS III\*

One strand of feminist thought is that the dramatic increase in rape rates during the 1970s and 1980s manifested the control men have over women's bodies.<sup>1</sup> Some feminists also see this control manifested in the creation and consumption of pornography.<sup>2</sup> To these individuals it is almost axiomatic that the two manifestations of male control over women are causally linked. This view can be

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1. See Martha R. Burt, *Rape Myths and Acquaintance Rape*, in *ACQUAINTANCE RAPE: THE HIDDEN CRIME* 37 (Andrea Parrot & Laurie Bechhofer eds., 1991) ("Rape and the threat of male violence are one of patriarchy's mechanisms for maintaining male control."); ANDREA DWORKIN, *PORNOGRAPHY: MEN POSSESSING WOMEN* 203 (1989) ("The sexual colonialization of women's bodies is a material reality: men control the sexual and reproductive uses of women's bodies. The institutions of control include . . . systematized physical aggression against women (for instance, in rape and battery)."); ANDREA MEDEA & KATHLEEN THOMPSON, *AGAINST RAPE* 125 (1974) ("The basic principle around which [feminist anti-rape groups] were organized . . . was simply this: that rape is . . . a crime against women that is encouraged by a sexist society; that women are seen, in our culture, not as whole human beings, but as objects and authorized victims of male aggression."); Larry Baron & Murray A. Straus, *Sexual Stratification, Pornography, and Rape in the United States*, in *PORNOGRAPHY AND SEXUAL AGGRESSION* 185, 185-86 (Neil M. Malamuth & Edward Donnerstein eds., 1984) (discussing the feminist view that rape is "an expression of a patriarchal (male dominated) social system").

2. See, e.g., DWORKIN, *supra* note 1, at 25 ("Male power is the *raison d'être* of pornography; the degradation of the female is the means of achieving this power."); Laura Lederer, *Introduction* to *TAKE BACK THE NIGHT* 19-20 (Laura Lederer ed., 1980) (concluding that "pornography is the ideology of a culture which promotes and condones rape, woman-battering, and other crimes of violence against women"); CATHARINE A. MACK-INNON, *FEMINISM UNMODIFIED* 146 (1987) (viewing pornography as "[c]entral to institutionalization of male dominance"). For a brief discussion of the definition of pornography, see *infra* note 65 and accompanying text.

roughly expressed in the following "anti-pornography" syllogism: the belief that it is permissible for men to control women sexually is a significant cause of rape; pornography teaches men that it is permissible to control women sexually; therefore, pornography is a significant cause of rape.<sup>3</sup>

For empirical "proof" of the syllogism, proponents rely on the escalating rape rates during the 1970s and 1980s, which were, after all, a period of more pervasive and more explicit pornography.<sup>4</sup> This "proof" of a causal link has increased the pressure to ban or restrict pornography as a means of reducing rape rates.<sup>5</sup> For example, the Canadian Supreme Court recently used a variation of the anti-pornography syllogism as part of its rationale to create a broad definition of material banned by Canada's obscenity law.<sup>6</sup> A bill pending before the United States Senate is even more explicit in accepting a causal link between pornography and rape.<sup>7</sup> The bill

3. See Larry Baron & Murray A. Straus, *Four Theories of Rape: A Macrosociological Analysis*, 34 Soc. PROBS. 467, 468 (1987) ("Some feminists theorize that pornography causes men to rape women.").

4. See *infra* Part II.

5. One response to this pressure was a model anti-pornography statute fashioned by two prominent feminist scholars, Andrea Dworkin and Catharine MacKinnon. See DONALD A. DOWNS, *THE NEW POLITICS OF PORNOGRAPHY* 44, 114-15 (1989). Under the MacKinnon-Dworkin model, individuals directly harmed by pornographic materials can recover damages in a private action against those who profit or benefit from the pornography. See MACKINNON, *supra* note 2, at 179-86 (discussing causes of action for (1) coerced participation in the creation of pornography; (2) forced exposure to pornography at home, in school, in the work place or in any other public area; (3) attack or physical assault directly caused by specific pornography; and (4) "trafficking" in pornography). The statute, which draws heavily on the psychological research supporting the anti-pornography syllogism, eventually became the basis for municipal ordinances in Minneapolis and Indianapolis. DOWNS, *supra*, at xi-xiii. Unlike previous obscenity laws, which focused on the moral harm caused by pornography, these ordinances are directed at protecting the civil rights of women. *Id.* at xi. While neither ordinance survived constitutional challenge, see *American Booksellers Ass'n v. Hudnut*, 771 F.2d 323, 332 (7th Cir. 1985) (striking down the Indianapolis ordinance on First Amendment grounds), *aff'd mem.* 475 U.S. 1001 (1986); DOWNS, *supra*, at 62 (discussing Mayor Fraser's veto of the Minneapolis ordinance on First Amendment grounds), a similar statute introduced in the Massachusetts legislature has renewed interest in this type of anti-pornography legislation. See Ma. H.B. 5194, 177th Gen. Ct., Reg. Sess. (1992); Tamar Lewin, *Anti-Pornography Proposal Re-emerges*, N.Y. TIMES, Mar. 15, 1992, § 1, at 16 (discussing the public debate over the Massachusetts bill); see also *infra* notes 7-8 and accompanying text (discussing a similar Senate bill).

6. See *Butler v. The Queen*, [1992] 1 S.C.R. 452, 509-10 (concluding that while pornography is protected by the right of free expression, the potential harm to women would justify banning material that is "degrading or dehumanizing"). While the Canadian Supreme Court stopped short of postulating a causal link between pornography and rape, it did mention the "threat to equality resulting from exposure to audiences of certain types of violent and degrading material." *Id.* at 497.

7. See S. 1521, 102d Cong., 2d Sess. (1991) (2d version, Aug. 14, 1992).

permits victims of sexual violence to recover damages from producers and sellers of pornography based on proof, by a preponderance of the evidence, that the pornography was a "substantial cause of the offense."<sup>8</sup>

In this Article, I will focus on the anti-pornography syllogism and its chief proof—the escalating rape rates of the past two decades. I will make two criticisms. First, it is far from clear that rape rates escalated during the last two decades; instead, they may have declined.<sup>9</sup> Second, no available scientific evidence establishes a causal relationship between pornography and rape. The second point is controversial and complex.<sup>10</sup> Nonetheless, despite statistical uncertainties, the evidence that I will discuss of a lack of causal link is more persuasive than the evidence to the contrary. The statistical evidence presented in this Article, therefore, makes the conclusion of the anti-pornography syllogism untenable, at least until other evidence is found.

The policy question of whether to ban pornography has dimensions that exist independently of the anti-pornography syllogism. Some oppose pornography not because it increases the risk of physical harm to women, but because it is morally wrong in itself.<sup>11</sup> Similarly, one could accept the anti-pornography syllogism and still resist (as some feminists do) the corollary call to ban pornography on essentially libertarian grounds.<sup>12</sup> Finally, much of the feminist

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8. *Id.* § 3(b)(3). The bill is silent, however, on the type of proof that would establish "substantial cause." Presumably, that issue is left to the jury.

9. *See infra* Part I.

10. A threshold question is what it means to "establish" a causal link. *See infra* Part III. Given the uncertainty that accompanies statistical efforts to prove cause-and-effect, allocating the burden of proof is likely to be decisive. An ancillary issue involves the level of proof constituting requisite certainty. As statistical proof is fraught with uncertainty, I would tentatively set the level at preponderance of the evidence, rather than a heightened civil standard like clear and convincing evidence or the rigorous criminal standard of beyond a reasonable doubt. This is the standard set forth in Senate Bill 1521. *See supra* notes 7-8 and accompanying text. The 1986 Commission on Pornography rejected legal terminology for the standard of proof on this issue in favor of "ordinary language" terms such as "convinced," "satisfied," and "concluded." *See U.S. DEPT OF JUSTICE, ATTORNEY GENERAL'S COMMISSION ON PORNOGRAPHY, FINAL REPORT 309 (1986) [hereinafter MEESE COMMISSION].*

11. I deal here only with pornography that depicts adult models. The policy reasons for banning child pornography are much more compelling. Indeed, the federal law restricting child pornography makes no concessions to First Amendment concerns and contains severe penalties. *See* 18 U.S.C. § 2251 (1988 & Supp. 1990) (providing for fines of up to \$100,000, imprisonment for up to 10 years, or both, for first-time offenders).

12. *See, e.g.,* DOWNS, *supra* note 1, at 51 (noting that anti-censorship feminists opposed a Minneapolis ordinance which sought to create a cause of action against pornographers for harm caused by pornography).

thought on pornography is not dependent on the anti-pornography syllogism. For example, the work of Catharine MacKinnon and Andrea Dworkin cannot be captured by any crude instrumental claim that pornography causes discrete harm. Their work is a philosophical attack on what they view as male construction of sexuality and gender.<sup>13</sup>

By focusing on the broader question of the construction of identity, MacKinnon and Dworkin condemn the harm caused by pornography's existence, without regard to any instrumental effects it might have.<sup>14</sup> Nonetheless, both MacKinnon and Dworkin have used their gender theory to help develop legislation that would permit damage suits against the producers and creators of pornography for physical harm "caused" by the pornography.<sup>15</sup> Thus, while the theory of MacKinnon and Dworkin does not depend on the claim that pornography causes physical harm, it appears to encompass that claim.

Moreover, less visionary theories that seek to justify a ban on pornography do crucially depend on the claim that some pornography is harmful.<sup>16</sup> Because the causal link to harm is central to some anti-pornography theories and consistent with others, I wish to examine it more carefully than most of its adherents have done by focusing on the causal link between pornography and rape. I take no position, however, on feminism's thorough-going critique of pornography's effects on the construction of sexuality and gender, or on the question of whether pornography should be more or less widely available, thus leaving for others these philosophical and policy questions.

I will first examine the twin empirical propositions that both

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13. See, e.g., DWORKIN, *supra* note 1; MACKINNON, *supra* note 2. For an excellent discussion of the Dworkin-MacKinnon position on pornography, see DOWNS, *supra* note 5, at 37-42.

14. See, e.g., MACKINNON, *supra* note 2, at 130 (noting that pornography is one way the reality of male dominance "is imposed as well as experienced" so that "when a man looks at a pornographic picture—pornographic meaning that the woman is defined to be acted upon, a sexual object, a sexual thing—the viewing is an act, an act of male supremacy").

15. See *supra* note 5; see also DOWNS, *supra* note 5, at 34-94 (describing involvement of Dworkin and MacKinnon in seeking passage of the Minneapolis ordinance); Lewin, *supra* note 5, at 16 (noting MacKinnon's support for a similar Massachusetts bill).

16. See, e.g., Cass R. Sunstein, *Pornography and the First Amendment*, 1986 DUKE L.J. 589, 626 (noting that the case for anti-pornography regulation "depends on simultaneous beliefs that pornography produces significant harms and that those harms cannot be alleviated through public debate alone"); see also *id.* at 594-602 (detailing Sunstein's perception of the harm caused by violent pornography).

rape rates<sup>17</sup> and pornography consumption<sup>18</sup> dramatically increased in the 1970s and 1980s. I will then turn to more specialized evidence on the causation question.<sup>19</sup> In that section, I will present new evidence that undermines earlier claims that a causal link between rape and pornography exists.

### I. RAPE RATES: ESCALATING, HOLDING STEADY, OR DECLINING?

Two federal agencies collect data on rape rates in the United States: the FBI and the Department of Justice. Both use essentially the same definition of rape and include attempted as well as completed rapes in their reported statistics.<sup>20</sup> The FBI publishes its data as the Uniform Crime Reports (UCR); these data, compiled state by state, are based on reported rapes<sup>21</sup> and, thus, necessarily understate the true rate to the extent that rapes are not reported to the police. The Department of Justice, on the other hand, draws its data from the National Crime Survey (NCS) of a random sample of households selected to reflect the nation as a whole, a procedure which should better estimate the true rate of rape in the country.<sup>22</sup> The NCS compilation also differs from the UCR data by separately identifying "stranger" and "non-stranger" rapes as component parts of its total rape rate.<sup>23</sup> All four measures are included in the following table as rapes per 1000 population.<sup>24</sup>

17. See *infra* Part I.

18. See *infra* Part II.

19. See *infra* Part III.

20. See FBI, 1990 UNIFORM CRIME REPORTS 15 (1991) (defining forcible rape as "the carnal knowledge of a female forcibly and against her will . . . [including] [a]ssaults or attempts to commit rape by force or threat of force"); BUREAU OF JUSTICE STATISTICS, U.S. DEP'T OF JUSTICE, CRIMINAL VICTIMIZATION IN THE UNITED STATES: 1973-88 TRENDS 93 (1991) [hereinafter CRIMINAL VICTIMIZATION: 1973-88 TRENDS] (defining rape as "[c]arnal knowledge through the use of force or the threat of force, including attempts").

21. See FBI, *supra* note 20, at 1-4.

22. See CRIMINAL VICTIMIZATION: 1973-88 TRENDS, *supra* note 20, at iii ("The NCS is able to provide an estimate of criminal victimization over time because of the numerous respondents who help to make it the second largest continuous survey in the United States.").

23. See *id.* at 93-94 (defining "stranger" as one whom the victim "identifies . . . as a stranger, did not see or recognize . . . , or knew . . . only by sight" and "non-stranger" as "[a]n offender who is either related to, well known to, or casually acquainted with the victim").

24. While the Bureau of Justice Statistics rounds its rates to the nearest one-tenth, the Uniform Crime Reports (UCR) rates, which are based on a much larger sample, can be rounded to the nearest one-hundredth.

TABLE 1  
Rape Rates Per 1,000 Population

Year	"Str."	NCS "Non-Str."	Tot. <sup>25</sup>	UCR Tot.
1973	.7	.3	.9	.24
1974	.7	.3	1.0	.26
1975	.6	.3	.9	.26
1976	.6	.3	.8	.26
1977	.6	.3	.9	.29
1978	.6	.3	1.0	.31
1979	.7	.4	1.1	.34
1980	.7	.3	.9	.36
1981	.6	.4	1.0	.36
1982	.5	.3	.8	.34
1983	.5	.3	.8	.34
1984	.5	.4	.9	.36
1985	.4	.3	.7	.37
1986	.3	.3	.7	.37
1987	.4	.3	.8	.37
1988	.3	.3	.6	.38
1989	.4	.2	.7	.38
1990	.3	.4	.6	.41

For two reasons, the rates in Table 1 do not reflect a woman's true risk of rape. First, the NCS and UCR population bases include males; because rape victims are women in all but a few cases, the rate per 1000 females would be roughly twice the rate shown.<sup>26</sup> More importantly, even the survey-derived NCS data may be missing a large number of actual rapes. A new survey using a different questioning technique estimated five times the number of rapes estimated by the NCS.<sup>27</sup> However, the project undertaken in

25. The "stranger" and "non-stranger" rates do not always add up to the National Crime Survey (NCS) total because of rounding. For example, if the "stranger" and "non-stranger" figures in 1976 were .57 and .27, respectively, they would round to .60 and .30, but the total (.84) would round to .80.

26. Women constitute 100% of UCR rape victims. See FBI, *supra* note 20, at 15 (defining rape as forcible sex with a female). Women constitute an average of 92% of the rape victims in the NCS data set from 1973-1988. See CRIMINAL VICTIMIZATION: 1973-88 TRENDS, *supra* note 20, at 15 (showing a range of 87% in 1980 to 98% in 1974). Thus, for purposes of roughly estimating the risk of rape, males can be excluded from the population base, effectively doubling the risk for women. The minuscule representation of males among rape victims in the NCS data also justifies the convention of referring to the perpetrator as male and the victim as female.

27. See David Johnston, *Survey Shows Number of Rapes Far Higher Than Official Figures*, N.Y. TIMES, Apr. 24, 1992, at A14.

this Article is not dependent on a close approximation of the true rape rate in any given year. Instead, it depends on making the best estimates over the past two decades of the true trends in rape rates. Even if the NCS data underestimate the actual rape rates by a large factor, they could still accurately depict the true trend of rapes if the estimated rates bear the same relationship to the actual rates over time. For example, if the NCS estimates routinely miss half the rapes, the NCS total rates in Table 1 would tell us that a woman's true risk of rape in 1990 was between two-tenths and three-tenths of one percent,<sup>28</sup> but that, since 1981, the rate had declined substantially.

Because only the UCR and NCS provide data over several years, they are the inevitable source for ascertaining the trend in rape rates. Yet, as Table 1 illustrates, the two sets of data are inconsistent. The long-term trend in UCR rates is clearly up, increasing by over seventy percent from 1973 to 1990, but the trend in NCS "stranger" and total rates over the same period is just as clearly down.<sup>29</sup> While the NCS "non-stranger" rates have not fallen, they have remained quite constant, with the 1988-1990 average precisely the same as the 1973-1975 average.<sup>30</sup>

Table 1 further discloses that the NCS rates are always substantially higher than the UCR rates. Presumably, this difference is attributable to the NCS identifying rapes that were not reported to the police.<sup>31</sup> If so, Table 1 suggests that a much larger percentage of rapes were reported in recent years. In 1973, only one-third of all rapes estimated by the NCS appear in the UCR reported rape data.<sup>32</sup> By contrast, almost four-fifths of 1990 NCS

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28. The 1990 total rate of .6 must be doubled, under this assumption, to reflect the missing rapes and then doubled again to reflect a woman's risk rather than the generic risk of a citizen. See *supra* note 26. This produces a risk of 2.4 per 1,000.

29. The average "stranger" rate for the period 1988-1990 is down 50% from the average for the period 1973-1975. The average total rate for these periods is down by about 30%.

30. It is preferable to average NCS rates over a two- or three-year period to smooth out anomalies caused by rounding the rates. See *infra* note 42 and accompanying text. Intermediate-term trends are also inconsistent between the two studies. The UCR rate rose markedly through the 1970s while NCS "stranger" rates held constant. The UCR rate reached a plateau in the 1980s when the NCS "stranger" rates were declining sharply.

31. But see Robert M. O'Brien, *Metropolitan Structure and Violent Crime: Which Measure of Crime?*, 48 AM. SOC. REV. 434, 436 n.7 (1983) (noting that "crimes which are recorded in police records are often not reported by interviewees to the NCS interviewers").

32. The UCR and NCS rates cannot be directly compared because they are computed from different total populations. The UCR use the entire United States population, while NCS uses the population age 12 and above. See FBI, *supra* note 20, at



rapes appear in the UCR rates.<sup>33</sup>

If the reporting rate increased by something of this magnitude, it would explain why the UCR and NCS rates appear to be moving in different directions.<sup>34</sup> Unfortunately, other NCS data are inconsistent with this hypothesis. The NCS keeps records of the rate at which the crimes disclosed in its survey were reported to police; although these figures show year-to-year variations for reporting rapes, they do not show a trend that would explain the difference between NCS and UCR rates.<sup>35</sup>

Another explanation for the discordant trends is that either the NCS data or the UCR data, or both, are simply inaccurate. Other than differences in the year-to-year rate at which citizens report crimes, the UCR and NCS data could be inaccurate in two ways. First, the information that citizens offer to the police or in response to the survey could be exaggerated, minimized, or simply false,

52; CRIMINAL VICTIMIZATION: 1973-88 TRENDS, *supra* note 20, at iii. After adjusting for the different population bases, however, total rapes shown by the UCR figures (51,000) for 1973 are about 33% of the total rapes estimated by NCS (156,000). See FBI, 1973 UNIFORM CRIME REPORTS 1 (1974); CRIMINAL VICTIMIZATION: 1973-88 TRENDS, *supra* note 20, at 15.

33. Again adjusting for different population bases, see *supra* note 32, the UCR number of reported rapes (103,000) for 1990 is 79% of the NCS estimate (130,000). See FBI, *supra* note 20, at 15; BUREAU OF JUSTICE STATISTICS, U.S. DEP'T OF JUSTICE, CRIMINAL VICTIMIZATION IN THE UNITED STATES, 1990, 16 (1992) [hereinafter CRIMINAL VICTIMIZATION, 1990].

34. Assume, for example, that the true rape rate in 1973 was 2.0 occurrences per 1000 population. The UCR rate of .24 occurrences for that year would translate into a reporting rate of 12%. Assume now that the true rape rate in 1990 fell from 2.0 to 1.3 occurrences but the reporting rate increased to 31.5%. This would cause the UCR rape rate to rise to .41 (as actually reported) even though the true rate had fallen by the magnitude suggested by the NCS data. Thus, assuming that the NCS rates represent a consistent percentage of actual rates, a large increase in the reporting rate could reconcile the UCR and NCS data. The inevitable implication of this reconciliation, of course, is that the NCS data offer a better picture of the true rape rates over time.

35. The percentage of rapes disclosed in the NCS survey that were reported to the police were as follows:

Rapes		Rapes	
<u>Year</u>	<u>Reported</u>	<u>Year</u>	<u>Reported</u>
1973	44%	1982	53%
1974	52%	1983	47%
1975	56%	1984	56%
1976	53%	1985	61%
1977	51%	1986	48%
1978	49%	1987	53%
1979	50%	1988	45%
1980	42%	1989	51%
1981	56%	1990	54%

leading to an inaccurate categorization of the events that occurred. Second, the police (or survey) categorization of even accurate information could be erroneous. There is no reason, however, to believe that either type of error occurs in other than a random fashion.<sup>36</sup> The trend in rape rates should not be affected by random categorization errors.<sup>37</sup>

Unlike the UCR data, the NCS data are based on a sample drawn from a larger universe and are, therefore, subject to sampling error—the possibility that the sample may not accurately represent the universe.<sup>38</sup> While the expected NCS sampling error could be relatively large in any given year,<sup>39</sup> the sampling error would also occur randomly. As random sampling error would show higher-than-actual rates in some years and lower-than-actual rates in other, it is extremely unlikely that over a ten- or fifteen-year period random error would always show fewer rapes than actually occurred.<sup>40</sup> Thus, the difference between the NCS and UCR rates cannot be dismissed as sampling error.

A related possible NCS error is peculiar to rape. Because rape is a relatively rare crime compared to the other crimes for which the NCS collects data,<sup>41</sup> the rate of rapes per 1000 population is small. As a result, a small change in the number of rapes can be lost in rounding the rape rates to the nearest one-tenth.<sup>42</sup> On balance, however, the rounding effect is likely to be insignificant when

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36. Baron and Straus “tested” the UCR rape data in several ways and concluded that the UCR figures do not contain large nonrandom errors. See Baron & Straus, *supra* note 1, at 202-04.

37. See George C. Thomas III & David Edelman, *An Evaluation of Conservative Crime Control Theology*, 63 NOTRE DAME L. REV. 123, 142 (1988) (stating that “[u]sual (random) errors in reporting will cancel each other out in long time periods”).

38. See CRIMINAL VICTIMIZATION, 1990, *supra* note 33, at 141-47 (discussing NCS survey methodology and standard errors).

39. See *id.* at 146 (computing the sampling error for a subcategory of robbery rates, 12.3 per 1000, and finding it 95% likely that the true rate was between 9.1 and 15.5 per 1000).

40. See *supra* Table 1 (showing that in every year from 1973 to 1990 the UCR rates were substantially lower than the total NCS rate).

41. See CRIMINAL VICTIMIZATION: 1973-88 TRENDS, *supra* note 20, at 1-5. The other crimes in the NCS survey are robbery, assault, personal larceny, burglary, household larceny, and motor vehicle theft. See *id.* Of the UCR crimes, murder is the only crime more rare than rape. See FBI, *supra* note 20, at 52-53. The NCS does not collect data on murder. See CRIMINAL VICTIMIZATION: 1973-88 TRENDS, *supra* note 20, at iii.

42. Consider the Table 1 “non-stranger” rate. It is extremely unlikely that the true rate was exactly .30 for 13 of the 18 years of the NCS data collection. The true rate during these 13 years could have varied from .251 to .350 and still have been rounded off to .3. A rate of .350 is roughly 40% higher than a rate of .251. Thus, a significant increase or decrease from year to year can be hidden by the rounding effect.

looking at long-term averages over a seventeen-year period. The average "stranger" rate from the period 1982-1990 was thirty-nine percent below the average for the period 1973-1981.<sup>43</sup> Again, it is the trend that counts, and the downward trend in the NCS "stranger" rate is clear enough from Table 1. It is very unlikely that the NCS rate would *decrease* by thirty-nine percent if the total UCR *increase* from 1973 to 1990 of seventy percent<sup>44</sup> represented the true rate.

A more likely, though partial, explanation for the divergent trends derives from the UCR aggregation of "stranger" and "non-stranger" rapes into a total figure. It is possible that our culture's definition of rape, when committed by a "non-stranger," has become more inclusive over the last twenty years. If so, more recent UCR rates would include acts of intercourse that would not appear in earlier rates, and any comparison of UCR rates over time would therefore be flawed. But the NCS data, which disaggregate these rape categories, would not be affected by a change in the definition of one category.

Table 1 provides threshold support for this hypothesis. Note that "stranger" rapes as reported by NCS fell sharply while "non-stranger" rapes held in a narrow range. If the overall rape rate, based on 1973 definitions, were falling while our culture simultaneously broadened the definition of "non-stranger" rape, the rates would look like the NCS data. Before this hypothesis can be accepted, however, we must have a plausible explanation of how and why the definition of "non-stranger" rape has changed.

The legal definition of rape used by the UCR and the NCS is essentially the same as that used by Blackstone two centuries ago—"the carnal knowledge of a woman forcibly and against her will."<sup>45</sup> But the key issue in separating rape from other carnal knowledge is force that vitiates consent; was the intercourse, in Blackstone's words, "against her will"? It is likely that cultural views of what

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43. The averages are .64 and .40, respectively. See Table 1. Averaging the rates tends to reduce rounding error because the actual rates will fall randomly both above and below the rounded figure. For example, if the actual "non-stranger" rate is .252 one year and .348 the next year, both rates round to .3. And, in this example, the actual average is also .3. Thus, if the sample is large enough, the average of the rounded rates will come very close to the actual average.

44. The UCR rape rate moved from a low of .24 in 1973 to a high of .41 in 1990—a 70% increase. See *supra* Table 1.

45. See 4 WILLIAM BLACKSTONE, COMMENTARIES \*210. Compare FBI, *supra* note 20, at 15 ("the carnal knowledge of a female forcibly and against her will") with CRIMINAL VICTIMIZATION: 1973-88 TRENDS, *supra* note 20, at 93 ("[c]arnal knowledge through the use of force or the threat of force").

constitutes forcible sex change over time.<sup>46</sup> Blackstone noted, for example, that Roman law considered prostitutes incapable of being raped, but that English law was different because “by crying out [the prostitute] showed herself unwilling to consent” to the sex act.<sup>47</sup>

A more modern example is the apparent change in the definition of acquaintance rape between 1981 and 1992. In a 1981 survey, respondents were asked whether, in varying hypothetical dating scenarios, the man raped the woman, and whether what he did was wrong.<sup>48</sup> The woman clearly expressed her nonconsent to sexual relations eight times in the various scenarios, and the man always ignored her demand that he desist his sexual advances.<sup>49</sup> In one scenario, while ninety-two percent of the respondents said what the man did was wrong, only fifty-eight percent said that a rape had occurred.<sup>50</sup> Apparently, no significant differences existed in the responses of men and women.<sup>51</sup> The researchers concluded that our culture perceived a category of conduct “where the man’s behavior is considered wrong, but the situation is not defined as rape.”<sup>52</sup> But when I repeated this survey in 1992, using a somewhat different group of subjects,<sup>53</sup> the intermediate category of conduct disclosed by that particular scenario had apparently all but disappeared. Ninety-seven percent of the respondents said that the act in the scenario was rape and one hundred percent said that it was wrong.

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46. See Gary Peller, *The Metaphysics of American Law*, 73 CALIF. L. REV. 1151, 1187-91 (1985) (noting that “[c]onsent is a construct of interpretive activity” which changes over time).

47. 4 WILLIAM BLACKSTONE, COMMENTARIES \*212-13 (quoting Bracton).

48. See R. Lance Shotland & Lynne Goodstein, *Just Because She Doesn’t Want To Doesn’t Mean It’s Rape: An Experimentally Based Causal Model of the Perception of Rape in a Dating Situation*, 46 SOC. PSYCHOL. Q. 220, 222-24 (1983).

49. *Id.* at 222-23.

50. *Id.* at 226 tbl. 3 (reporting responses to a scenario where the woman made verbal and physical protest early in the encounter and the man used a low degree of force).

51. The researchers mentioned a possible gender difference only with respect to whether the respondents blamed the woman for the sex act, but concluded that no difference existed. *Id.* at 229-30.

52. *Id.* at 226.

53. Results of author’s study on file with the *Maryland Law Review*. The 1992 group was the first-year class at Rutgers Law School; the 1981 group was composed of introductory psychology students at the Pennsylvania State University. See Shotland & Goodstein, *supra* note 48, at 222. The different compositions of the groups may, of course, be wholly or partially responsible for the different results. But the law students surveyed had not yet studied rape law, and no self-evident characteristic of law students and psychology students suggests that the former would be more likely to define a sex act as rape. Both groups were roughly 50% male and 50% female. *Id.*; law school group: 55% male.

Although this single finding is hardly conclusive, two tentative inferences seem permissible. First, some women in 1981, and presumably in earlier years, might not have viewed sex as rape even though they had manifested their nonconsent. Indeed, the 1981 researchers found that women were as likely as men to blame the hypothetical woman for the sex act that occurred.<sup>54</sup> Second, the 1992 survey suggests that this attitude has probably changed over the last decade, and more women would now view this type of nonconsensual sex as rape.

Public discourse on acquaintance rape in the last few years tends to confirm this change in attitude. Much has been written about rape in dating situations, and the clear message has been that rape occurs whenever a woman is forced to have sex against her will, whether by a date, a husband, or a stranger.<sup>55</sup> The empirical data and the public discourse thus suggest it is more likely that women today would consider nonconsensual sex with acquaintances as rape, regardless of any voluntary participation in activities short of intercourse.

If this conclusion is sound, some of the increase in the UCR rate may be a function of women's changing perception of what constitutes rape.<sup>56</sup> It is, after all, the woman's viewpoint that is critical because it is the victim, almost always a woman, who defines

54. *Id.* at 230 (finding "no sex difference on victim blame").

55. See, e.g., Laurie Bechhofer & Andrea Parrot, *What is Acquaintance Rape?*, in *ACQUAINTANCE RAPE: THE HIDDEN CRIME*, *supra* note 1, at 16-17 ("When the law is interpreted in its broadest form, rape occurs any time a person is forced to have sex . . . against his or her will and without his or her consent."); see generally Douglas N. Husak & George C. Thomas III, *Rape, Social Convention, and Reasonable Mistake*, 11 *LAW & PHIL.* 95, 114-25 (1992) (discussing some of the scholarly literature on acquaintance rape).

56. A changing definition of "non-stranger" rape is, at most, a partial explanation of the UCR rate increase. To see the maximum effect of a changing definition, assume that the NCS ratio of "stranger" to "non-stranger" rape accurately reflects, in a given year, the prevailing cultural definition of "non-stranger" rape. Assume also that the definition of "stranger" rape has not changed in the last 20 years so that any change in the ratio reflects a change in the definition of "non-stranger" rape only. Assume further that the UCR rate is a composite of "stranger" and "non-stranger" rape in the same ratio in any given year as the NCS rate. In other words, in 1973, when the NCS ratio was 2.3:1, the UCR rate of .24 consisted of .17 "stranger" rapes and .7 "non-stranger" rapes. The question is what would the 1973 UCR rate have been if the 1990 NCS ratio of .75:1 had been applied? Again, the assumption here is that the 1973 UCR rate would have been higher if it reflected as many "non-stranger" rapes as would have been reflected under the 1990 definition.

The 1973 UCR rate would have been .40 rather than .24 if the 1990 NCS ratio had applied (the assumed 1973 UCR "stranger" rape rate of .17 divided by the 1990 NCS ratio of .75, with the resulting assumed "non-stranger" rate of .23 added to the assumed "stranger" rape rate of .17, for a total assumed 1973 UCR rate of .40). This calculation suggests that the rape rate has not increased since 1973, and that fully .17 (.40-.23) of

the act as rape, either to the police or to the NCS. And the divergence in NCS rates for "stranger" and "non-stranger" rapes is consistent with the hypothesis that more "non-stranger" sex acts are being reported as rape today than in earlier years.

To be sure, the divergence in NCS rape rates could be a real divergence, uninfluenced by social construction of the "non-stranger" category. This account is not fully satisfying, however, because it does not explain why NCS rates have gone down and UCR rates have gone up over the last two decades. On the other hand, a real divergence between "stranger" and "non-stranger" rape rates has a certain plausibility in light of the "rape awareness" movement. While the same causal forces may underlie both categories of rape,<sup>57</sup> the "rape awareness" movement has sought changes in the environment (better lights, more police, etc.) and in the behavior of women that would make "stranger" rape harder to commit.<sup>58</sup> A "non-stranger" rapist, on the other hand, has the same

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the .41 rate in 1990 consisted of "non-stranger" rapes that were occurring but did not appear in the 1973 data.

I must confess, however, some misgivings about the previous calculation. The 1990 NCS ratio looks atypical, as does the 1989 ratio, perhaps the result of two roundings that were close to .05. A more conservative approach would suggest obtaining an average ratio from three years (1988, 1989, and 1990) to even out what appear to be rounding effects. That ratio is 1.11:1. Using the average ratio on the 1973 UCR figures produces an adjusted rate of .32 or an additional .08 of unrecognized "non-stranger" rapes.

Either adjustment substantially reduces a 70% UCR increase in the period 1973-1990, to almost zero in one case and to only a 28% increase in the other. Both adjusted UCR trends are, however, still different from the NCS total rate trend, down by roughly 33%. Thus, the adjustment is a significant, though partial, potential explanation for the difference in trends.

57. Indeed, it is misleading even to speak of two "categories" of rape. There is only one crime of rape—having forcible sexual intercourse against the will of the victim. *See* MODEL PENAL CODE § 213.1 cmt. 1 (noting that the central notion of rape has always been "unlawful sexual intercourse committed upon a female by imposition").

58. *See* NANCY GAGER & CATHLEEN SCHURR, *CONFRONTING RAPE IN AMERICA* 259-78 (1976) (discussing the rape prevention work of several rape crisis centers which began springing up in the early 1970s); NAT'L CENTER FOR THE PREVENTION AND CONTROL OF RAPE, U.S. DEP'T OF HEALTH AND HUMAN SERVICES, *EXEMPLARY RAPE CRISIS PROGRAMS: A CROSS-SITE ANALYSIS AND CASE STUDIES* 6-8 (1985) (describing the rape prevention programs of rape crisis centers in the 1970s).

The "rape awareness" movement has also encouraged victims to report rapes. This aspect of "rape awareness" is more relevant to the UCR rates, which depend on the willingness of the victim to come forward; and thus, greater rape awareness is another factor suggesting that part of the increase in UCR rates may be an increased reporting rate. But encouraging women to report rapes seems likely to enhance the value they place on their physical autonomy, *see infra* note 117 and accompanying text, which might also cause more NCS respondents to categorize a sex encounter as rape. Because the categorization issue is more difficult with respect to "non-stranger" rapes, any effect from "rape awareness" is probably substantially greater in that category.

access to his victim today as he did two decades ago.

Rape awareness is almost certainly part of the explanation for the divergence in NCS "stranger" and "non-stranger" rates, but it is doubtful that heightened awareness would cause a divergence of the magnitude seen in Table 1. While "non-stranger" rates held constant,<sup>59</sup> the average "stranger" rate fell from .64 in the period 1973-1981 to .40 in the period 1982-1990; a decline of thirty-seven percent. Yet it is difficult to believe that rape awareness has had this great an impact, especially in light of the fact that the "stranger" rape rates began to decline substantially only in the 1980s when the rape awareness movement was already ten to fifteen years old.<sup>60</sup>

It seems likely, therefore, that the divergence in NCS "stranger" and "non-stranger" rates is attributable in substantial part to a broadening definition of "non-stranger" rape.<sup>61</sup> Under this reading of the NCS data, overtly forcible intercourse began to decline around 1980, while the societal definition of rape simultaneously broadened, focusing less on overt force and more on other coercive practices that vitiate the woman's consent. These potentially related developments suggest that the NCS "stranger" rape rates are a more accurate representation of the true trend in rape rates over time than any other measure we have.<sup>62</sup>

The NCS "stranger" rates, which declined dramatically from 1973 to 1986, clearly refute the anti-pornography premise that rape rates have increased dramatically during the 1970s and 1980s. Even the UCR data show a significant slowing in the rate of increase. From 1980 to 1990, the UCR rate increased only fourteen percent compared to an increase of fifty percent from 1973 to 1980.<sup>63</sup> If the pornography explosion continued through the 1980s, the slowing growth of the UCR figures would also tend to undermine the anti-pornography syllogism's link between pornography and rape.

59. The average "non-stranger" rate was .32 for the 1973-1981 period and .31 for the 1982-1990 period.

60. See *supra* note 58.

61. See Berl Kutchinsky, *Pornography and Its Effects in Denmark and the United States: A Rejoinder and Beyond*, in 8 *COMPARATIVE SOCIAL RESEARCH* 301 (R. Tomasson, ed. 1985).

62. To be clear, I do not claim that sex accomplished by means of overt force is somehow a more "true" form of rape. All I claim is that useful comparisons cannot be made over time if the offense definition is simultaneously changing. Thus, the only way to compare rape rates over time is to use a rape definition that has changed as little as possible and make the brute assumption that all other forms of rape have roughly the same trend. This methodology suggests using NCS "stranger" rape rates. It is unlikely that we are now socially constructing the concept of "stranger" rape differently from the way we did twenty years ago because overt force is typically used in this category.

63. See *supra* Table 1.

Having tested the premise that rape rates have increased dramatically, I now wish to test the "proof" of the anti-pornography syllogism: that pornography consumption increased substantially in the last twenty years. Many would probably take that proposition on faith. But as just demonstrated, another tenet that many take on faith—rapidly increasing rape rates—may not be true. Moreover, one of the most telling criticisms of temporal studies of the relationship between rape and pornography is the lack of quantification of pornography consumption.<sup>64</sup> I will, therefore, attempt an estimate of pornography consumption.

## II. PORNOGRAPHY CONSUMPTION

A difficult threshold question is what constitutes pornography. A rough, but useful, definition is "sexually related material, with some degree of explicitness."<sup>65</sup> It may be impossible to reach agreement about which socially constructed images are pornographic even under this broad definition; it is certainly impossible to measure the more subtle ways these images are created. For instance, advertisements have used sexual images more frequently in the last few years to sell a broad spectrum of products. Whether or not these images are pornographic, their incidence is virtually impossible to measure. At the other end of the spectrum, the sub-universe of violent pornography, while undeniably pornographic, also cannot be measured because no data exist. It seems likely, however, that certain overt, measurable forms of sexually explicit material can serve as a proxy for the nonmeasurable forms. Based on this assumption, an index of pornography consumption can be created from annual dollar sales of three types of measurable pornography: "soft-core" sex magazine circulation, adult video sales,

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64. See Steven A. Childress, *Pornography, "Serious Rape," and Statistics: A Reply to Dr. Kutichinsky*, 26 LAW & SOC'Y REV. 457, 458 (1992).

65. See Steven A. Childress, *Reel "Rape Speech": Violent Pornography and the Politics of Harm*, 25 LAW & SOC'Y REV. 177, 179 (1991). Cass Sunstein uses "pornographic" much more narrowly to mean material that "both sexualizes violence and defines women as sexually subordinate to men." See Sunstein, *supra* note 16, at 592. While a writer can define a word to mean anything he or she wishes, Sunstein's argument that the underlying harm-based rationale for regulating pornography can be derived from its historical definition, *see id.* at 595, seems odd. "Pornography" derives from the Greek *porne*, which means "prostitute." Thus, it literally means a description of the activities of prostitutes. See KATHLEEN BARRY, *FEMALE SEXUAL SLAVERY* 174 (1979). I do not believe prostitution inevitably entails the kinds of specific harm to women that Sunstein details. See Sunstein, *supra* note 16, at 595-602. See generally GORDON HAWKINS & FRANKLIN E. ZIMRING, *PORNOGRAPHY IN A FREE SOCIETY* 25 (1988) (noting a "Babelish confusion" in definitions of pornography).



and revenues from "phone sex" (telephone calls in which the caller hears or relates sexual fantasies).

Another assumption underlies the index. The level of pornography consumption is important only to the extent that it has an effect on rape rates. Thus, the dollar-denominated index used here would be significant only if an increased number of dollars spent on pornography buys a corresponding increase in pornographic effect. If the effect is not related to the total dollars spent, then any dollar-denominated index misses the point.<sup>66</sup>

But it seems plausible to treat a dollar's worth of pornography (adjusted for inflation) as equivalent in effect with any other dollar's worth of pornography. If, for example, a single adult videotape costs four times more than an adult magazine, the purchaser of the videotape presumably receives at least four times the pornographic effect of a magazine. And who would be a better judge of the pornographic effect than the consumer? If this premise is correct, it is reasonable to treat the videotape as "worth" four magazines. While this "dollar-equivalence" principle may be somewhat harder to defend in the phone sex context,<sup>67</sup> it underlies all three components of the index. Thus, Table 2 contains a consumption index that combines the dollars spent on three categories of pornography: soft-core pornographic magazines (represented by ten of the most popular in the category),<sup>68</sup> phone sex calls,<sup>69</sup> and adult

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66. The three types of pornography consumption are later broken down by units sold. See *infra* Table 3.

67. The argument is that the purchaser of a magazine or a videotape becomes the owner of a tangible object that can be reused indefinitely and, indeed, shared with others. The phone sex call, on the other hand, does not automatically create tangible evidence of itself. Thus, a forty-dollar phone call may have less "effect" than a videotape or four magazines. There is, however, no available method to "discount" the phone sex revenues to achieve an "effect parity" with magazines and videotapes. Moreover, the specific mechanism by which pornography might cause rape is unknown. Thus, positing a difference in the effect of a phone call versus a videotape is speculative. On the other hand, we can be certain that the repeat phone sex customer has made the judgment that his call will provide him with at least as much temporary pornographic effect as an equivalent dollar value of magazines or videotapes.

68. Because magazine sales for many soft-core and all hard-core magazines are unavailable, I used only the following ten magazines, not all of which were published (or made their circulation public) in all of the years studied: *Playboy*, *Penthouse*, *Oui*, *Forum*, *Hustler*, *Gallery*, *Cheri*, *Club*, *High Society*, and *Genesis*. When a magazine ceased supplying circulation figures to the Audit Bureau of Circulations, I assumed a decline of 10% per year for the next five years, after which I dropped the magazine from the index. Dollar volumes were obtained by multiplying the total annual circulation by an estimated cost per issue.

69. Data about revenues from "900" numbers were considered first. See Richard D. Hylton, *All About Pay-Per-Call Lines: For 900 Numbers, the Racy Gives Way to the Respectable*,

videotapes.<sup>70</sup>

TABLE 2  
 Pornography Consumption Index  
 Estimates in Millions of Constant 1982-1984 Dollars  
 (Sales of Magazines, Videos, and Phone Sex)

Year	Dollars	Year	Dollars
1970	16	1981	45
1971	19	1982	38
1972	28	1983	340
1973	34	1984	430
1974	30	1985	565
1975	35	1986	690
1976	38	1987	625
1977	47	1988	595
1978	44	1989	635
1979	42	1990	710
1980	43		

N.Y. TIMES, Mar. 1, 1992, § 3, at 8. This data may be flawed in three ways. First, revenues from 900 numbers "are estimates based on incomplete data and some in the industry believe they are somewhat inflated." *Id.* Second, although the revenue data are broken down into the categories of "Entertainment," "Information," "Ordering," and "Other," the information does not segregate phone sex calls. While I believe that most of the calls in "Entertainment" are for phone sex, the remainder being primarily calls to sports and entertainment idols, I indulged a conservative assumption that only half of the "Entertainment" calls are phone sex calls. Third, 900 numbers represent only a part of the phone sex business; the other revenue sources are phone numbers—often 800 numbers—that require a credit card. The ratio of ads for these "other number" phone sex services to 900-number phone sex ads in *Penthouse* from 1985 through 1991 was 3.5 to 1. Again, to be conservative, I tripled the total revenue figure from the above 900-number calculation and added that to the 900-number revenues. The assumption here, of course, is that advertising space is, over time, roughly commensurate with revenues derived from the advertising.

70. See *Charting the Adult Industry*, 1990 ADULT VIDEO NEWS BUYER'S GUIDE, Jan. 1990, at 6, 6-7 (reporting data based on a survey of 500 stores) (used with permission of Paul Fishbein, publisher of *Adult Video News*). While *Adult Video News* promotes the adult video industry, and has an interest in demonstrating the success of the industry, the figures show a sales peak in 1986, a decline in 1987, and then a stabilization in 1988 and 1989. These developments suggest unbiased data.

Because the other data in the consumption index was reported at retail value, the adult tape sales data, which represent wholesale costs, were adjusted to retail value by assuming a gross profit margin of 34%. See *1985 Retailer Survey*, VIDEO STORE, Aug. 1985, at 72 (noting an average "gross margin percentage of 34% for videos retailing in 1985"). Again, this is a conservative estimate, as the mark-up for adult tapes is likely to exceed the mark-up in the industry generally. Telephone Interview with Paul Fishbein, Publisher of *Adult Video News* (Dec. 8, 1992).

Table 2 has limitations, particularly in comparisons between the 1970-1982 period and the 1983-1990 period. It is hardly plausible that consumption went up by a factor of nine between 1982 and 1983. The steep increase in 1983 is attributable to the fact that data on the sale of adult videotapes first became available in that year. Comparisons within these periods, however, do seem plausible. Table 2 discloses that the consumption of pornography more than doubled between 1970 and 1980. A partial confirmation of this estimate of pornography consumption is Joseph Scott's longitudinal content analysis of sex references in mass circulation magazines.<sup>71</sup> Scott found that the number of sex references in nonpornographic magazines roughly doubled between 1970 and 1980.<sup>72</sup> Between 1983 and 1990, according to Table 2, consumption doubled again. Thus, a conservative estimate is that the consumption of pornography quadrupled between 1970 and 1990. Given the greater availability of *Playboy* and *Penthouse* through the 1970s, the advent of affordable VCRs in the early 1980s, and the proliferation of phone sex services in the late 1980s, the Table 2 estimates seem plausible.<sup>73</sup>

For those troubled by the use of a dollar-denominated index to represent the level of pornography consumption,<sup>74</sup> the data can be displayed for each of the three components by sales units. While magazine data are reported by magazines sold, the other data require assumptions to obtain comparable per unit sales figures.<sup>75</sup> Table 3 contains these data sets. (Recall that the magazine data include only a subset of all sex magazines.)

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71. See Joseph E. Scott, *Updated Longitudinal Content Analysis of Sex References in Mass Circulation Magazines*, 22 J. SEX RES. 385 (1986).

72. See *id.* at 387-88. Using *Reader's Digest*, *McCall's*, *Life*, *Saturday Evening Post*, *Time*, and *Newsweek* as a database, the study found an increase from .42 to .88 references per page during the period 1970-1980. *Id.* at 387.

73. Table 2 is also generally consistent with the 1986 Attorney General's Commission on Pornography; its report stated that "more than in 1970, when the President's Commission on Obscenity and Pornography issued its report, and indeed more than just a year ago in 1985, we live in a society unquestionably pervaded by sexual explicitness." MEESE COMMISSION, *supra* note 10, at 277.

74. See *supra* note 66.

75. The adult video data are total wholesale sales. To convert to retail, I added 34%. To determine the number of units, I divided by the average cost of a video in the years in question. See *supra* note 70. To compute the number of minutes of phone sex, I averaged the prices advertised in *Penthouse* for 1991, with the result being roughly \$2 per minute.

TABLE 3  
Units of Pornography Sold

Year	Magazines	Videos	Phone Sex (Minutes)
1970	6,000,000	0	0
1971	7,500,000	0	0
1972	9,000,000	0	0
1973	12,000,000	0	0
1974	11,500,000	0	0
1975	12,500,000	0	0
1976	14,500,000	0	0
1977	14,000,000	0	0
1978	14,000,000	0	0
1979	15,000,000	0	0
1980	14,000,000	0	0
1981	13,500,000	0	0
1982	12,000,000	0	0
1983	11,500,000	7,000,000	0
1984	11,500,000	10,000,000	0
1985	10,500,000	13,000,000	40,000,000
1986	8,500,000	20,000,000	70,000,000
1987	9,000,000	21,000,000	80,000,000
1988	8,000,000	20,000,000	85,000,000
1989	6,500,000	21,000,000	120,000,000
1990	6,000,000	21,000,000	190,000,000

One message emerges clearly from Table 3: the national appetite for pornography is fickle as to the desired form. Sales of pornographic magazines have been on the decline since 1980 and, at least in the index, are at the same level in 1990 as they were in 1970. This decline was accompanied by an increase in the newer medium of videotape. In 1986, however, videotape sales reached a plateau, with the dramatic escalation now in phone sex.<sup>76</sup> The next phase in consumption may be through networked computers and then interactive computers that permit users to experience their

76. To check the dramatic increase in phone sex revenues shown in Table 3, I counted the phone sex advertising in a random sample of *Penthouse* issues for each year from 1984 to 1991. The figures below represent the average number of pages devoted to such advertising in each issue:

fantasies.<sup>77</sup> This changing appetite makes it more difficult to gauge whether overall consumption is on the increase.

Table 3 raises yet another complexity. If phone sex is generically distinct from other forms of pornography consumption in terms of its effect on rape rates,<sup>78</sup> and is, therefore, excluded from Table 3, the result is a leveling-off of pornography consumption in the late 1980s. If, on the other hand, phone sex is properly considered as a component of the dollar-denominated index, the evidence suggests a continued rapid increase in the consumption of pornography that would affect rape rates if the anti-pornography syllogism is correct. Indeed, Table 3 discloses that roughly 130,000,000 pornographic videotapes were sold between 1983 and 1990, and almost 200,000,000 minutes of phone sex were sold in 1990 alone. This is more than one adult video and about two minutes of phone sex for each adult male in the United States. Moreover, the Table 3 index does not include video rentals or subscriptions to cable channels that show soft-core adult videos. All of this evidence suggests a substantial increase in pornography consumption over the last two decades.

The evidence presented thus far puts the proponents of the anti-pornography syllogism in a somewhat awkward position. Central to their syllogism is the twin claim that rape rates and pornography consumption increased significantly in the 1970s and

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<u>Year</u>	<u>Ad Pages</u>
1984	0
1985	0
1986	1
1987	2
1988	3.5
1989	3
1990	5.5
1991	10

The overall trend in advertising confirms the figures in Table 3 and even the change in magnitude is roughly consistent. For example, in both sets of figures, the 1990 number is about 2.5 times the 1987 number.

77. See John Markoff, *The Latest Technology Fuels the Oldest of Drives*, N.Y. TIMES, Mar. 22, 1992, § 4, at 5 (reporting the growth of sexually explicit computer bulletin boards and interactive video games).

78. Phone sex may be distinct from other forms of pornography in that it is not purchased as a tangible product. Consequently, the pornographic effect of phone sex may dissipate. See *supra* note 67. A difference may also be attributable to some quality about phone sex itself. For example, many phone sex numbers advertise live conversation. Perhaps this contact with a human being comes closer to replicating an actual sex act. Thus, phone sex may be more of an end in itself than other stimulation that could cause a prospective rapist to seek additional gratification.

1980s. The data show, however, that only one-half of that claim is likely true: pornography consumption did experience tremendous growth during the last twenty years. But the most reliable evidence, that of the NCS, indicates that rape rates have actually declined over time. Even the UCR data fail to show the type of dramatic increase in rape rates which would be consistent with the explosion in pornography consumption that occurred in the 1980s. If the pornography consumption increase is not even roughly matched by a corresponding increase in rape rates, where is the causal connection advanced by the syllogism? That question is the subject of the next section.

### III. THE PORNOGRAPHY-RAPE CAUSAL QUESTION

Causation is an exceedingly difficult concept. It indulges a threshold assumption that because *Y* follows *X* in time—say, the vase fell to the floor and broke after my hand touched the vase—it is possible for *X* to cause *Y*. Perhaps causation does not exist, or maybe, as Kant argued, causation is simply the way the human brain orders information.<sup>79</sup>

Whatever causation means, there are grave difficulties inherent in proving that *X* causes *Y* in a complex, multi-causal world. Imagine trying to prove that pornography causes rape. One could, at first, imagine a causal link that operated overtly and quickly. This would assume the existence of a group of rape-prone men, who, upon consuming the “right” pornography, quickly seek a victim. In this case, one could say with some confidence that consuming the pornography caused the rape.

At the other end of the imagined causal spectrum is a less self-evident relationship that works slowly and subtly. Imagine, for example, that pornography causes men to have lower esteem for women, to value their autonomy less and to think that their sole function is to excite and satisfy male lust. This type of causal effect might take years or even decades to manifest itself in rape rates and might show up only in studies of large groups of men. Indeed, under this view, pornography might cause men to become rape-prone without being the immediate precipitating cause of the act of rape.

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79. See IMMANUEL KANT, *CRITIQUE OF PURE REASON* 50-51, 138-40 (Norman K. Smith trans., unabridged ed. 1965) (1787) (concluding that “the concept of a cause is nothing but a synthesis (of that which follows in the time-series, with other appearances) according to concepts,” all of which constitute a “unity, which has its *a priori* rule, and which subjects the appearances to itself”).

The first type of causal connection—the immediate effect on individual men—presumably could be measured by laboratory studies, and will be discussed in subpart B. The second, less self-evident, type of causal relationship presumably would show up over time as a relationship between rape and pornography consumption, most easily measured as national phenomena.<sup>80</sup> I will turn first to whether the long-term trends suggest a causal link.

### A. National Trends Over Time

To facilitate a comparison of the trends in rape rates with the estimated consumption of pornography, Figure 1 contains most of the information from Tables 1 and 2 rearranged into graph form.<sup>81</sup> Figure 1 is presented in two parts, with 1970-1982 (Figure 1A) separate from 1983-1990 (Figure 1B), because the consumption figures are different in those periods by an order of magnitude and because different units make the graphs easier to read.<sup>82</sup>

While the UCR rates move somewhat in tandem with pornography consumption in Figure 1A, that relationship does not hold in Figure 1B, where consumption soared while UCR rates were almost flat. The NCS rates move, for the most part, in the opposite direction from pornography consumption in both Figures. If the estimates of consumption in Table 2 are more or less accurate, only three explanations of the results in Figure 1 are plausible. First, the effect of pornography consumption on rape rates may not be measurable, either because it is de minimis or because it is masked by other causal forces. Second, pornography may have no positive causal effect on rape rates. Third, the effect may lag behind the consumption by several years.

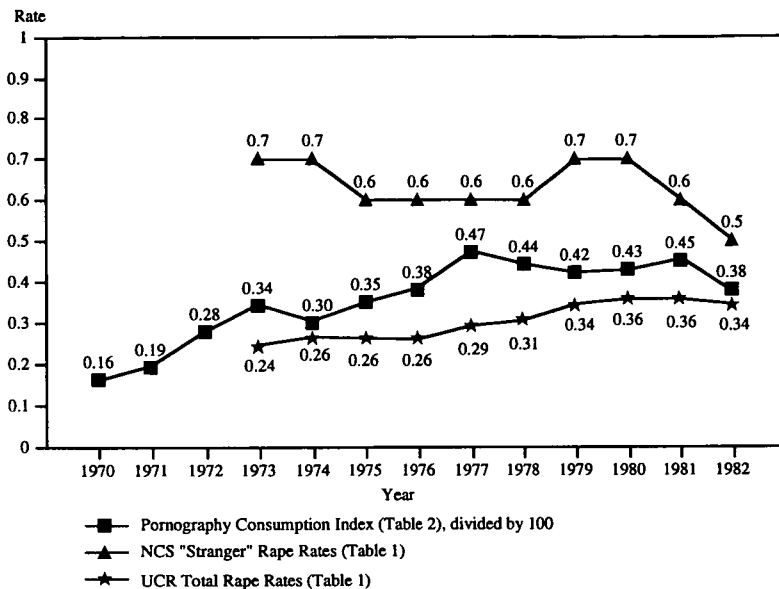
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80. See, e.g., Berl Kutchinsky, *Towards an Explanation of the Decrease in Registered Sex Crimes in Copenhagen*, in 7 TECHNICAL REPORTS OF THE COMMISSION ON OBSCENITY AND PORNOGRAPHY 263 (1971) (examining the decrease in sex crimes in Copenhagen from 1959-1969). Kutchinsky has described his own studies as demonstrating that in the four countries he studied, West Germany, Denmark, Sweden, and the United States, "rape never increased more than nonsexual violent crime, and there was an overall tendency toward stagnating or even decreasing rape rates in precisely those years when pornography became more pervasive than ever through videos and cable or coded television." Berl Kutchinsky, *The Politics of Pornography Research*, 26 LAW & SOC'Y REV. 447, 451 (1992).

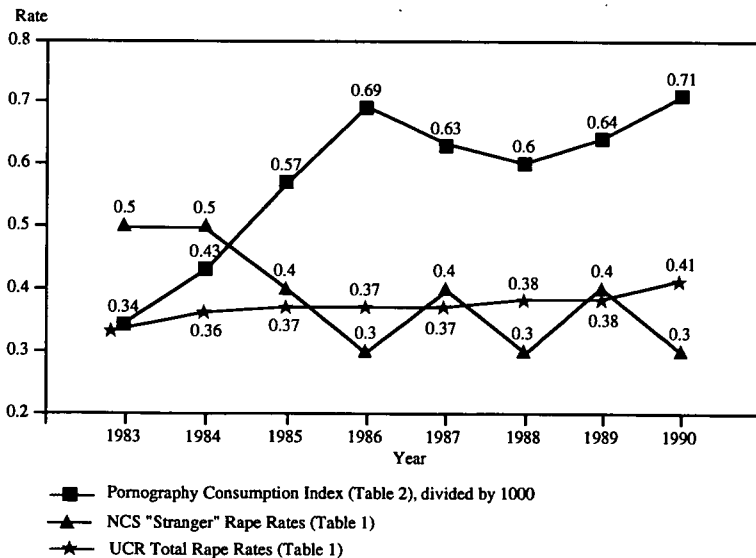
81. Because the NCS "stranger" rape rates are likely to be more accurate than the NCS "non-stranger" rates, however, only the former are included.

82. The consumption index from 1970-1982 is divided by 100 and the index from 1983-1990 is divided by 1000.

**FIGURE 1A**  
**Pornography Consumption and Rape Rates**  
**Trends over Time (1970-1982)**



**FIGURE 1B**  
**Pornography Consumption and Rape Rates**  
**Trends over Time (1982-1990)**





The first two explanations deny the possibility of finding evidence of a causal link, and are therefore irrelevant for the purposes of this Article. This leaves only the third explanation: that an increased consumption of pornography causes a change in attitude toward women that increases the likelihood of rape, but requires a relatively long period of time to manifest itself.<sup>83</sup> This "lag" explanation is somewhat consistent with the UCR data. The sharp increase in pornography consumption from 1970 to 1973 parallels the increase in the UCR rates from 1976 to 1980. Similarly, the slowing rise in consumption in the period 1973 to 1981 was followed by a flattening of the trend in the UCR rates in the period 1980 to 1989.

Another virtue of the "lag theory" is that it can be tested against the rape rates in the early 1990s. Assuming, again, that the consumption estimates in Table 2 are roughly accurate, the "lag theory" necessarily predicts that we will soon see a period of increasing rape rates, produced as an echo of the large increase in pornography consumption in the mid- to late 1980s.

The echo may be beginning. As Table 1 discloses, the UCR rates increased substantially in 1990, and preliminary NCS figures show a large increase in 1991.<sup>84</sup> However, these preliminary NCS figures are not yet reported by category; thus, it is unclear whether the increase is attributable to a rise in the most reliable indicator of trends in the rape rate—NCS "stranger" rates.<sup>85</sup> Moreover, one year does not a trend make. Perhaps the data for the next few years will provide some clues as to whether the "lag theory" is plausible.<sup>86</sup>

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83. A "lag" theory would, I think, be consistent with the MacKinnon-Dworkin theory that pornography is part of the male construction of female sexuality and gender. Any changes in that construct caused by increased consumption of pornography would likely be evolutionary, taking years to crystallize into a view of women as more "deserving" of being raped.

84. See Johnston, *supra* note 27, at A14 (noting a preliminary estimated increase in total rapes of almost 60%). But see Lisa D. Bastian, U.S. DEP'T OF JUSTICE, *Criminal Victimization 1991*, at 3 tbl. 2 (Oct. 1992) (showing a smaller estimated increase, within the range of statistical error, in the final NCS report).

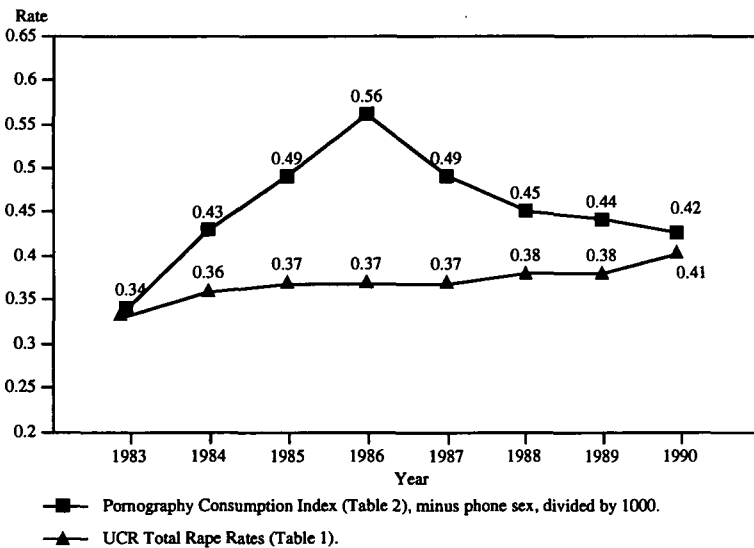
85. See *supra* note 62 and accompanying text.

86. While there is nothing conceptually implausible about "lag" theories, they are usually an argument of last resort. Lacking evidence of a more immediate relationship, a theorist can always postulate a "lag" between cause and effect. As data over time tend to include "sawtooth" moves (the stock market is a good example), almost any data set can be made consistent with a particular theory if a sufficiently elastic "lag" is postulated. By introducing this additional imprecision, "lag" theories make virtually impossible the already treacherous task of isolating a plausible cause-and-effect relationship. If, for example, the effect of pornography on rape rates is theorized to lag by several years, any effect "demonstrated" by the data could just as easily be the effect of changes in other variables (demographics, poverty, urbanization, etc.). The potential causal effect of other variables is discussed *infra* Part III.C.

Figure 1B also suggests a contrary, more controversial, hypothesis. One can accept that pornography promotes an unacceptable image of women as passive sex objects without accepting the further premise that its consumption is positively correlated with rape. It is possible that pornography simultaneously strengthens a certain image of women and provides an outlet for men who are drawn to that image.<sup>87</sup> If so, it is not inconceivable that pornography actually reduces the incidence of rape. Stabilization or further declines in the rape rates during the 1990s would support this hypothesis.

The analysis to this point depends on the Table 2 index being an accurate measure of pornography consumption and, to a lesser extent, on a belief that the NCS "stranger" rape rates are the best

**FIGURE 2**  
Adjusted Pornography Consumption and UCR Rape Rates  
Trends over Time (1982-1990)

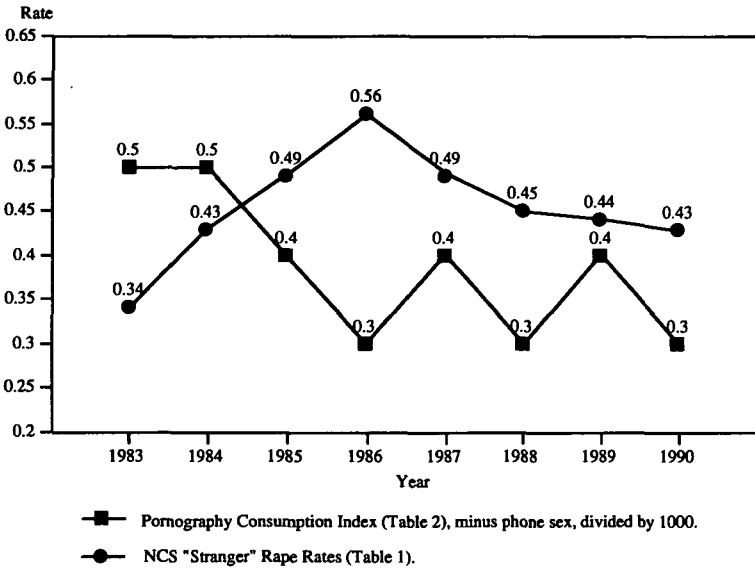


87. See THE REPORT OF THE COMMISSION ON OBSCENITY AND PORNOGRAPHY 179 (Random House 1970) (from materials released by the Commission on Sept. 30, 1970) (noting suggestions that pornography "perform[s] a useful function for individuals by extending opportunities for sexual expression[,] . . . serves a cathartic function, i.e., it serves as a sexual release, . . . [and] may have instructional value and may discourage sexual inadequacy").

measure of the actual incidence of rape. To examine one contrary set of premises, a dollar-denominated index that excludes phone sex<sup>88</sup> is compared in Figure 2 with the UCR rates. As phone sex is part of the consumption index only in the 1983-1990 period, Figure 2 is limited to that period. There is not much correlation in Figure 2. While the lines moved in the same direction in the 1983-1986 period, the magnitude of the increase in consumption dwarfed the very slow increase in UCR rates. Since 1986, the lines have actually been moving in opposite directions. And, as Figure 3 shows, the NCS "stranger" rates do not match the adjusted consumption index (which excludes phone sex) very well either. The NCS rates went down while consumption went up, and then stabilized in a range between .3 and .4 as consumption fell. Nor would Table 3 look very

FIGURE 3

Adjusted Pornography Consumption and NCS  
"Stranger" Rape Rates  
Trends over Time (1982-1990)



88. See *supra* note 67 (justifying the exclusion of phone sex from a dollar-denominated index).

different if "non-stranger" rates were used, as they have been locked in a narrow range between .3 and .4 for the entire period (with a single dip in 1989 to .2). But, ultimately, a consumption index without phone sex misses the point. The pornography consumer is presumably the best measure of what causes maximum effect per dollar spent, and it is not for researchers to second-guess that choice. Thus, Figures 1A and 1B seem a more plausible description of the long-term relationship between consumption and rape rates.

Having considered the available national data over time, I will turn to the other end of the spectrum. Does pornography cause individual men to become more rape-prone?

### B. *Laboratory Studies*

Laboratory simulation studies use volunteers to test the experimental relationship between certain stimuli and an attitude that is hypothetically associated with rape. For example, a group of male volunteers might be given an attitude survey and then divided into three groups, each having the same average rating for hostility toward women and for tolerance of rape. Each group would then be shown a different kind of movie, only one of which is pornographic. If the group shown pornography tested higher in hostility toward women and higher in tolerance of rape, the researcher has evidence of a causal link between certain stimuli and certain attitudes toward women and rape.<sup>89</sup> A different type of laboratory simulation involves showing various types of stimuli to groups of rapists and then measuring their sexual arousal.<sup>90</sup>

The inherent difficulty with laboratory simulations is that they cannot, and are not designed to, achieve a direct measurement of a causal link between pornography and rape. For obvious reasons, ethical principles forbid designing a study in which some subjects might commit rape. Instead, laboratory simulations seek to measure the conduct or attitudes thought to be linked with rape. But

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89. See, e.g., James V. Check & Ted H. Guloien, *Reported Proclivity for Coercive Sex Following Repeated Exposure to Sexually Violent Pornography, Nonviolent Dehumanizing Pornography, and Erotica*, in *PORNOGRAPHY: RESEARCH ADVANCES AND POLICY CONSIDERATIONS* 159, 170-71 (Dolf Zillmann & Jennings Bryant eds., 1989) (conducting a study similar to the one described in the text and finding that subjects who had been exposed to violent pornography reported a greater likelihood of raping than those not exposed).

90. See, e.g., W.L. Marshall, *Pornography and Sex Offenders*, in *PORNOGRAPHY: RESEARCH ADVANCES AND POLICY CONSIDERATIONS*, *supra* note 89, at 185, 191-93 (reviewing the findings of several studies of this nature and concluding that "[f]urther research is desperately needed").

that link remains conjectural.<sup>91</sup>

Some of the conjecture seems questionable. While increased hostility toward women or increased tolerance of rape may seem intuitively to be linked with rape, one could imagine a psychological model of rape in which neither factor plays a major role.<sup>92</sup> Moreover, no one knows whether any measured effect from exposure to pornography in the laboratory plays a causal role in rape. We do not know, for example, "whether the effects of repeated exposures to violent pornography are temporary or cumulative."<sup>93</sup> Nor can we isolate the causal effect of any non-temporary change in attitude. After all, "the vast majority of males do not become rapists after being exposed to pornography. . . . It seems likely that other factors, such as an existing deeply rooted anger against women, are more important in causing violent aggression."<sup>94</sup> Indeed, studies of convicted rapists have consistently shown that, in comparison to control groups, their exposure to pornography occurred less frequently and later in life.<sup>95</sup>

Thus, the principal difficulty with laboratory simulations is that they can never establish whether attitudinal or physiological changes measured shortly after exposure to pornography in the laboratory setting are a causal factor in rape. Because much of the weight of the criminal and moral law is placed on behavior rather than attitudes or thoughts,<sup>96</sup> this lack of evidence renders the laboratory simulations problematic as indications of a causal link between pornography and rape. However, evidence of a causal link can be obtained from state-by-state correlation studies that use actual rape rates.

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91. Cf. Childress, *supra* note 65, at 184 (noting that "the larger problem of drawing real-world inferences from the [laboratory] data is inadequately resolved").

92. For example, rapists may love women and hate themselves; if so, rape could be a way of having the loved object reject them and confirm their self-hatred.

93. See Downs, *supra* note 5, at 168.

94. *Id.* at 169.

95. See Childress, *supra* note 65, at 182 n.4 (noting that "[t]his consistent finding is especially telling since such studies may be the closest model to an epidemiological study that we have").

96. First-year law students quickly learn the black-letter rule of criminal law that no crime has occurred in the absence of an *actus reus* (forbidden act). While this rule is an oversimplification, see generally DOUGLAS N. HUSAK, *PHILOSOPHY OF CRIMINAL LAW* 78-111 (1987) (examining the physical component of crime), it at least expresses the widely approved goal of not punishing thoughts alone.

### C. *Correlation Studies*

Correlation studies seek to uncover statistical relationships between hypothetically relevant factors and the variable being studied—rape rates, in this Article. By comparing data from each of the fifty states, which exhibit the hypothetically relevant factors in varying degrees, a correlation study can determine which of these factors are significantly related to the variation in rape rates among the states. An advantage to these studies is that, through the use of reported rape rates, they are able to measure reported behavior rather than attitudes. One disadvantage, however, is that the only rape rates available on a state-by-state basis are the UCR rates, which are subject to reporting distortions if women in different states report rapes to the police with varying frequency. A further statistical difficulty inherent in correlation studies is determining whether a significant correlation is merely coincidental—or “spurious” in the language of statisticians. To illustrate, if a significant correlation exists between rape rates and the number of green cars registered in a state, there is every reason to suspect that such a correlation is spurious.

Strong statistical correlations, however, will imply causation when viewed in conjunction with our intuition about what factors seem to cause a certain result. There is, for example, an extremely strong correlation between circulation of pornographic magazines and the percentage of a state’s population that is male.<sup>97</sup> Although this does not prove that being male is a factor tending to cause one to purchase a pornographic magazine, most would be willing to make that leap from correlational findings to causation. Thus, while correlational research can suggest causation, the results must be interpreted within the construct of our pre-existing notions about what causation means.<sup>98</sup>

To clarify the relationships among variables, statisticians use a technique of mathematical modeling known as multiple regression analysis. Multiple regression analysis seeks to isolate the effect that each independent variable has on the dependent variable being

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97. Performing a correlation analysis using 1980 data produces a correlation of .76,  $p < .001$ , which means that the probability of random chance causing the correlation is less than 1 in 1000. Baron and Straus ran a correlation analysis between sex magazine circulation and the percentage of male population, aged 15-24, which produced a lower correlation (.58) but one that was still significant at  $p < .001$ . See LARRY BARON & MURRAY A. STRAUS, *FOUR THEORIES OF RAPE IN AMERICAN SOCIETY* 199 (1989).

98. It is difficult to talk about causation without echoing Kant. See KANT, *supra* note 79, at 569 (“Thus all human knowledge begins with intuitions, proceeds from thence to concepts, and ends with ideas.”).

studied. While variables can be highly correlated when compared only to each other, they may not be significantly linked in a multiple regression equation because other variables in the equation may better explain the behavior of the dependent variable.

Consider a strongly significant correlation between variables *A* and *B* where our intuition tells us that *A* causes *B*. We do not, by statistics or intuition, rule out the possibility that the link in question is part of a more complex relationship. Perhaps *C* is linked with both *A* and *B*. Indeed, *C* might provide a better explanation of the variation in *B* than *A* does. If so, and *C* is not included in the multiple regression equation, the link between *A* and *B* may appear significant.<sup>99</sup> Once *C* is introduced into the equation, however, multiple regression will tell us that *C*, and not *A*, better explains the variation in *B*.

For example, in a 1984 study conducted by Larry Baron and Murray Straus, the correlation between the distribution of pornographic magazines and rape rates was found to be very significant.<sup>100</sup> But the magazine variable might have been "standing in" for some other variable that better explains the variation in rape rates. Perhaps the most significant correlation is between rape rates and the ratio of males to females.<sup>101</sup> As noted earlier, this "gender" variable has a high positive correlation with pornographic magazine circulation.<sup>102</sup> Thus, if gender is not introduced into the multiple regression equation, the correlation between rape rates and pornographic magazine circulation might be simply reflecting a correlation between rape rates and gender. Indeed, this scenario is consistent with the data from Alaska, which consistently has one of

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99. This "missing link" principle is still urged, for instance, by the tobacco industry scientists who argue that a true causal link between smoking and lung cancer has yet to be proven. See, e.g., Irwin Stark, *The Tobacco Industry's Last Gasp*, N.Y. TIMES, Sept. 27, 1988, at A35 (noting the tobacco companies' insistence that there is no "direct evidence" that smoking cigarettes causes lung cancer). They argue that, despite the statistical link, it may be that the group of smokers is more likely to engage in some other activity that is the actual cause. See, e.g., Jamie Talen, *Focus on Smoking: Good News and Bad*, NEWSDAY, June 24, 1989, at 7 ("All of [the] studies make a statistical correlation, not a causal one. . . ." (quoting Brennan Dawson, assistant to the president of the Tobacco Institute)). If this is so, the link between smoking and lung cancer would become insignificant when a variable for the other activity is introduced into the regression equation.

100. See Baron & Straus, *supra* note 1, at 197 (giving correlation of .630 and  $p < .001$ , which means a probability of less than 1 in 1000 that the correlation is attributable to random chance).

101. See BARON & STRAUS, *supra* note 97, at 55.

102. See *supra* note 97 and accompanying text.

the highest rape rates<sup>103</sup> and one of the highest circulations of pornographic magazines.<sup>104</sup>

In their study, Baron and Straus attempted to unmask any "stand in" or proxy relationship between pornography distribution and rape by introducing variables into the multiple regression equation that might be linked to both rape rates and pornographic magazine circulation.<sup>105</sup> They also introduced variables that tested the association between rape rates and other violent crimes as well as between rape rates and a measure of the status of women.<sup>106</sup> The possible relationship between rape rates and other violent crimes is obvious: rape is a form of violence against women; a state in which people are more prone to resort to other forms of violence is therefore likely to have a high rape rate as well. The relationship between the status of women and rape is less obvious. Some have speculated that a culture in which women are held in low regard is likely to have a high rape rate.<sup>107</sup>

Table 4 summarizes the Baron and Straus results by identifying the independent variables tested, the significance of the marginal correlation of each independent variable with the rape rate (the  $p$  value), and whether this correlation is positive or negative. In social science research, a correlation is considered statistically significant when the  $p$  value is less than .05, which means that there is less than a five percent chance that the correlation is coincidental or spurious.<sup>108</sup> A positive marginal correlation means that the independent variable is linked, in this equation,<sup>109</sup> with higher rape rates, and a

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103. See BARON & STRAUS, *supra* note 97, at 42 tbl. 3.1 (ranked first in 1960, fourth in 1970, and second in 1980).

104. See *id.* at 121 tbl. 5.6 (ranked first in 1979 with 59.0 per 100 males age 15 and older). But Alaska also has one of the two largest percentages of males nationally. See *id.* at 50 tbl. 3.5b (54.3%).

105. See Baron & Straus, *supra* note 1, at 199-200. The additional variables are given as numbers 6-10 in Table 4, *infra*. See also *id.* at 200 tbl. 7.5.

106. See *id.* at 199-200 & tbl. 7.5; *infra* Table 4 (variables 2-5).

107. See Baron & Straus, *supra* note 1, at 194-95 (suggesting the possibility of an inverse relationship between the status of women and the incidence of rape, but finding no support for this hypothesis in their results). MacKinnon and Dworkin have based much of their work on the belief that the subjugation of women in society leads directly to a high rate of rape. See *supra* note 1.

108. The lower the  $p$  value, the more certain we can be that the statistical relationship is not spurious. Thus,  $p < .001$  is more significant than  $p < .05$ .  $R^2$  is a measure of the amount of variation in rape rates explained by the equation. An  $R^2$  of .80 or more is considered excellent in social science research.

109. The marginal or partial correlation is limited to the particular equation because it reflects the best statistical fit with the dependent variable minus the remainder of the equation. Thus, it is possible for an independent variable to be positively correlated with the dependent variable when other independent variables are included in an equa-



negative marginal correlation means a link with lower rates. The legend describes the variables that are not self-explanatory.

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TABLE 4  
Baron and Straus Multiple Regression:  
1979 Rape Rate as Dependent Variable

<u>Independent variable</u>	<u><math>p &lt;</math></u>	<u>Marginal correlation</u>
1 SMCX	.001	positive
2 UCR homicide rate	.001	positive
3 UCR aggravated assault rate	.001	positive
4 SWX	.014	positive
5 UCR robbery rate	.052	negative
6 % resident in SMSAs	.001	positive
7 % black	.001	negative
8 % below poverty income level	.011	positive
9 % male of population, age 18-24	.019	negative
10 males per 100 females, age 15-24	.090	positive

$$R^2 = .83$$

#1 Composite circulation rate, soft-core sex magazines.

#4 Composite measure of the status of women.<sup>110</sup>

#6 Percentage of state population living in standard metropolitan statistical areas.

#7 Percentage of state population that is African-American.

#8 Percentage of state population below poverty line.

#9 Percentage of state population age 18-24.<sup>111</sup>

#10 Ratio of males to females, age 15-24.

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With the exception of robbery and gender, all variables in Table 4 have a  $p < .05$  and are, therefore, significantly related to

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tion, but to be negatively correlated if regressed against the dependent variable alone (or negatively correlated in the equation and positively correlated when regressed alone).

110. The Status of Women Index (SWX) "uses 22 indicators of sexual equality, covering four key aspects of society: economic, educational, political, and legal." Baron & Straus, *supra* note 1, at 194 n.3.

111. The Baron and Straus table actually shows this variable to be "% Male of population age 18-24." *Id.* at 200 tbl. 7.5. This is most likely a misprint; the text states this variable as "percentage age 18-24." *Id.* at 193. Variable #10 is also a measure of gender, and there would appear to be no reason to introduce two gender variables into the same equation. Larry Baron stated in a telephone conversation that he, too, believed that the statement of the variable in Table 7.5 was a misprint. Telephone Interview with Larry Baron (Apr. 8, 1991).

rape.<sup>112</sup> Some of the significant correlations, although valid, are probably noncausal. For example, no one would claim that murder or aggravated assault *causes* rape or (if the correlation had been significant) that robbery *prevents* rape.<sup>113</sup> Similarly, while living in an urban area makes it easier to commit stranger rape—because the pool of strangers is obviously much larger—it may not represent a causal connection.<sup>114</sup>

A surprise in the Baron and Straus equation is the positive, significant correlation between the incidence of rape and the status of women—that is, higher status of women was statistically correlated with higher rape rates. This result, which is contrary to suggestions in the feminist literature,<sup>115</sup> could be explained as a form of “male backlash” against the rapid emergence of women in our society during the 1970s. Under this theory, some men could be using rape as a way of maintaining a position of power over women.<sup>116</sup>

Baron and Straus’ alternative hypothesis, however, seems more plausible. “High status” likely correlates with high self-esteem and, thus, with a stronger sense of the importance of personal autonomy. Women who fit this description might be more likely to report a rape in order to assert or vindicate their personal autonomy. A higher reporting rate in these high-status states would result in a positive correlation between high status and the UCR rape rates that

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112. When I attempted to replicate the Baron and Straus equation using equivalent data sets from the same years they used, the link between rape rates and two additional variables—age and poverty—was nonsignificant. These differences, of course, may be the result of an inadvertent use of data sets different from those used by Baron and Straus. The other *p* values, however, were similar to those found by Baron and Straus, including the *p* value for SMCX.

113. The robbery variable came close to being significant at  $p < .052$  and the correlation was negative. The *negative* relationship between robbery rates and rape rates potentially supports the view that rape is a crime of violence rather than a sexual crime. See Baron & Straus, *supra* note 1, at 189 (noting the feminist argument that sex is a crime of violence and citing several sources). Robbery might be different from murder and aggravated assault, which are positively related to rape, in that robbery is an instrumental crime—one that is committed in order to achieve a tangible goal (the acquisition of money) rather than an emotional goal.

114. *But see* David Jaffee and Murray A. Straus, *Sexual Climate and Reported Rape: A State-Level Analysis*, 16 ARCHIVES OF SEXUAL BEHAV. 107, 120 (1987) (tentatively concluding that urbanization is a form of “social disorganization” that may be a causal factor leading to an increased incidence of rape). The causal argument is stronger for poverty than urbanization because it is easier to see poverty as a manifestation of social disorganization. See *id.* (concluding that poverty is another manifestation of social disorganization that may be causally related to rape rates).

115. See *supra* note 1.

116. See DIANA E.H. RUSSELL, THE POLITICS OF RAPE: THE VICTIM’S PERSPECTIVE 14 (1975) (“More threatened male egos may mean more rape.”).

is attributable to the reporting distortion.<sup>117</sup>

The correlation in the Baron and Straus study between “soft-core” sex magazine circulation (SMCX) and rape rates was extremely significant ( $p < .001$ ). The 1986 Meese Commission on Pornography relied, in large part, on the work of Baron and Straus to conclude that a “highly significant, and not obviously spurious relationship exists” between these variables.<sup>118</sup> But as the remainder of this Article shows, obvious or not, the relationship is very likely to be spurious because SMCX is less likely a causal force than a proxy for gender and sexual liberalism.

1. *The Gender Link.*—Baron and Straus restricted the gender variable to the fifteen- to twenty-four-year-old age group because it was their “target group”—the group that was most likely to rape and be raped.<sup>119</sup> But a better way to test whether readership of sex magazines is serving as a proxy for a correlation between gender and rape rates is to use gender in the total population.<sup>120</sup> As Table 5 illustrates, when the broader measure of gender is substituted for the fifteen- to twenty-four-year-old variable, the correlation of the SMCX variable with rape rates falls to nonsignificance, while most of the other variables retain about the same relationship to rape rates.<sup>121</sup>

117. See Baron & Straus, *supra* note 1, at 206 (positing that the tendency for rape rates to increase with the status of women indicates a “reporting effect” rather than a “true relationship”).

118. MEESE COMMISSION, *supra* note 10, at 155. Baron and Straus were more cautious in drawing conclusions from their study than was the Meese Commission. See Baron & Straus, *supra* note 1, at 206-07 (noting the possibility that the correlation is caused by an “unspecified third variable” and, therefore, that “the rape rate would not be altered if sex magazines did not exist”).

119. Telephone Interview with Larry Baron, *supra* note 111.

120. My calculations show that the level of pornographic magazine readership is more highly correlated with the percentage of males in the total population than with the percentage of males in the 15-24 age group.

121. In addition to SMCX, poverty and age also show very different correlations with rape rates when comparing my figures with those of Baron and Straus. See *infra* Table 5. But this may be because I inadvertently used different data sets for poverty and age. See *supra* note 112. If so, it is not surprising that they continue to show a different relationship with rape rates.

The broader gender measure suffers from multicollinearity, meaning that it is strongly correlated with other independent variables. While multicollinearity is sometimes a reason to be skeptical of multiple regression results, it is to be expected when using interdependent variables. Because many more men than women commit violent crimes or read pornographic magazines, a gender measure should correlate strongly with these variables as well as with the dependent rape variable. Moreover, if men older than 24 are more likely to do some of these things than men 15-24, a measure of gender

TABLE 5  
Equation with New Gender Variable (#10A)  
Compared with Baron and Straus

	<u>Ind. variable</u>	Thomas Equation		Baron & Straus Equation	
		<u>p &lt;</u>	<u>Marginal correlation</u>	<u>p &lt;</u>	<u>Marginal correlation</u>
1	SMCX	.321	pos.	.001	pos.
2	UCR homicide rate	.001	pos.	.001	pos.
3	UCR assault rate	.001	pos.	.001	pos.
4	SWX	.004	pos.	.014	pos.
5	UCR robbery rate	.112	neg.	.052	neg.
6	% SMSA	.001	pos.	.001	pos.
7	% black	.011	neg.	.001	neg.
8	% poverty	.078	pos.	.011	pos.
9	% age, 18-24	.489	pos.	.019	neg.
10	% male, 15-24			.090	pos.
10A	% male, total population	.040	pos.		
		$R^2 = .87$		$R^2 = .83$	
#1	Composite circulation rate, soft-core sex magazines.				
#4	Composite measure of the status of women. <sup>122</sup>				
#6	Percentage of state population living in standard metropolitan statistical areas.				
#7	Percentage of state population that is African-American.				
#8	Percentage of state population below poverty line.				
#9	Percentage of state population age 18-24. <sup>123</sup>				
#10	Ratio of males to females, age 15-24.				
#10A	Ratio of males to females, total population.				

2. *The Sexual Liberalism Link.*—As Baron and Straus recognized, another variable for which SMCX could be a proxy is sexual liberalism.<sup>124</sup> Both rape rates and pornographic magazine circulation

in the entire population will create more multicollinearity than the 15-24 age group gender measure.

122. See *supra* note 110.

123. See *supra* note 111.

124. See Baron & Straus, *supra* note 1, at 207 (“[S]tates that provide a more relaxed and casual atmosphere for sexual relations may also produce conditions that make men more comfortable buying sex magazines.”). The “sexual liberalism” term comes from

could be byproducts of a sexually liberal atmosphere. This could occur in two very different ways. Sexual liberalism may actually lead to more rapes.<sup>125</sup> Or rape victims in sexually liberal states may be more likely to report rapes. If either or both of these phenomena occur frequently, the data would show a correlation between rape and sexual liberalism. In addition, pornographic magazine circulation should also be correlated with sexual liberalism. Thus, an equation that lacks a measure of sexual liberalism might produce a proxy correlation between rape and pornographic magazine circulation.

Measuring sexual liberalism is a difficult task, but church membership could serve as a rough, negative proxy for this variable. If a state has a high rate of church membership, its citizens are likely to be less sexually liberal. As Table 6 illustrates, church membership and the broader gender measure, when introduced into the Baron and Straus equation, cause a radical change in the SMCX correlation.

As hypothesized, the church membership variable has a very significant negative correlation with rape rates ( $p < .013$ ). In addition, it further reduces the significance of the correlation between the SMCX variable and rape rates,<sup>126</sup> which is now so insignificant that the SMCX variable can be removed from the

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Jaffee and Straus. While they do not precisely define the term, they note that it is "the degree of sexual liberalism, openness, or permissiveness that exists in a state as measured by attitudes toward sex-related issues." See Jaffee and Straus, *supra* note 114, at 109.

125. It "might make some men feel sexually deprived relative to others and promote the belief that they are entitled to sex even if it means using coercion or force to obtain it." Baron & Straus, *supra* note 1, at 207.

126. *But cf.* Jaffee & Straus, *supra* note 114, at 117 (using a much more complex sexual liberalism measure and concluding that its inclusion in the evaluation did nothing to alter the significance of the soft-core pornographic magazine circulation (SMCX) variable). Because the church membership variable radically reduces the significance of the SMCX variable, it may be measuring some other social aspect instead of (or, more likely, in addition to) sexual liberalism. This "something else" could be the level of social control—that is, the ability of church members to follow rules of all sorts. See Steven Stack & Mary Jeane Kanacy, *The Effect of Religion on Forcible Rape: A Structural Analysis*, 22 J. SCI. STUDY OF RELIGION 67 (1983). The key point, however, is that whatever church membership is measuring, when the variable is not entered into the equation, SMCX appears to be serving as its negative proxy. Thus, some of the correlation Baron and Straus found between rape rates and SMCX properly belongs to this "social control" variable.

TABLE 6  
Equation with Church Membership (#11)  
and New Gender Variable (#10A)  
Compared with Baron and Straus

	<u>Ind. Variable</u>	Thomas Equation		Baron & Straus Equation	
		<u>p &lt;</u>	<u>Marginal correlation</u>	<u>p &lt;</u>	<u>Marginal correlation</u>
1	SMCX	.553	pos.	.001	pos.
2	UCR homicide rate	.001	pos.	.001	pos.
3	UCR assault rate	.001	pos.	.001	pos.
4	SWX	.004	pos.	.014	pos.
5	UCR robbery rate	.137	neg.	.052	neg.
6	% SMSA	.001	pos.	.001	pos.
7	% black	.002	neg.	.001	neg.
8	% poverty	.035	pos.	.011	pos.
9	% age, 18-24	.835	pos.	.019	neg.
10	% male, 15-24			.090	pos.
10A	% male, total population	.132	pos.		
11	church membership	.013	neg.		
		$R^2 = .89$		$R^2 = .83$	
#1	Composite circulation rate, soft-core sex magazines.				
#4	Composite measure of the status of women. <sup>127</sup>				
#6	Percentage of state population living in standard metropolitan statistical areas.				
#7	Percentage of state population that is African-American.				
#8	Percentage of state population below poverty line.				
#9	Percentage of state population age 18-24. <sup>128</sup>				
#10	Ratio of males to females, age 15-24.				
#10A	Ratio of males to females, total population.				
#11	Percentage of state population claiming church membership. <sup>129</sup>				

127. See *supra* note 110.

128. See *supra* note 111.

129. Derived by combining Christian Church members, 1980, with Jewish population, 1986, and dividing by the state's population. See BUREAU OF THE CENSUS, U.S. DEP'T OF COMMERCE, STATISTICAL ABSTRACT OF THE U.S. at 55 tbl. 79 (108th ed. 1988).

equation without loss of explanatory power.<sup>130</sup> This finding confirms the results of a later study by Baron and Straus in which they also found no significant correlation between SMCX and rape rates when the equation also contained a variable based on "violence approval."<sup>131</sup> Perhaps church membership is a rough, negative proxy for "violence approval." This would explain why the addition of either variable reduces the significance of the correlation between the SMCX variable and rape rates. Alternatively, "violence approval" and church membership may measure quite different aspects of our culture, with SMCX serving as a proxy for both aspects. In either case, the equation in Table 6 suggests what Baron and Straus now accept: the significant correlation they found in their 1984 study between sex magazine circulation rates and rape rates is actually a proxy for other correlations and, thus, unmeaningful.<sup>132</sup>

In 1986, the Meese Commission on Pornography proclaimed that evidence in three studies strongly suggested a causal link between pornography and rape.<sup>133</sup> But none of these studies fully

130. Removing SMCX from an equation that contains all the Table 6 variables does not change the  $R^2$  (or explanatory power) of the equation. Professor David Edelman, University of Sydney, concluded that the best equation from a statistician's perspective is one without either SMCX or the age variable because neither variable seemed to be explaining variations in the rape rates. Communication from David Edelman, May 20, 1992.

131. See Baron & Straus, *supra* note 3, at 482 n.13 ("This finding supports the view that the correlation between pornography and rape [is dependent on] an underlying variable such as hypermasculinity."). Introducing a church membership variable into the original Baron and Straus equation with its gender variable limited to the 15-24 age group also has the effect of reducing the SMCX variable from strongly significant ( $p < .001$ ) to marginally significant ( $p < .046$ ).

132. See *supra* note 131. Despite finding a statistically significant correlation in their study, Jaffee and Straus also concluded that the link is probably noncausal. See Jaffee & Straus, *supra* note 114, at 121 ("[I]t is the joint dependence of sex magazine readership and rape on hyper-masculinity, rather than the influence of exposure to sexually explicit materials per se, that produces the correlation between sex magazine readership and rape."). See also Joseph E. Scott & Loretta A. Schwalm, *An Examination of Adult Theater Rates and Rape Rates by State*, in *CONTROVERSIAL ISSUES IN CRIME AND JUSTICE* 40-53 (Joseph E. Scott & Travis Hirschi eds., 1988) (finding an insignificant correlation of  $p < .543$  between the number of adult theaters and rape rates).

133. See MEESE COMMISSION, *supra* note 10, at 944-45 (citing Baron & Straus, *supra* note 1); *id.* at 948 (citing Jaffee & Straus, *supra* note 114); *id.* (citing Joseph E. Scott & Loretta A. Schwalm, *Rape Rates and the Circulation Rates of Adult Magazines*, 24 J. SEX RES. 241 (1988) (the Commission used a preliminary version)). Indeed, the Meese Commission implicitly criticized Jaffee and Straus for their caution in drawing conclusions from the correlational data. See *id.* at 151 (noting that Jaffee and Straus "continue to hold out hope—against all the evidence mentioned in the previous paragraph—that a relationship between [another variable] and rape rates would render the sex-magazine correlation spurious"). But compare HAWKINS & ZIMRING, *supra* note 65,

controlled for the possibility that the correlation was merely a proxy for a correlation between rape rates and gender or rape rates and sexual liberalism.<sup>134</sup> An equation that includes a broad gender variable and a church membership variable produces a correlation between pornographic magazine circulation and rape rates which is more than fifty percent likely to be caused by chance.<sup>135</sup>

In addition, this study raises the question of whether non-legal forms of social control, such as religion, may act to repress rape rates or crime rates generally. But because the purpose here was to test the link between pornography and rape, those questions are left for another day.

#### IV. CONCLUSION

To conclude that pornography has no measurable causal connection with rape is not, of course, to conclude that it might not have an effect that we lack the tools to measure. Perhaps only certain kinds of pornography cause rape. Much of the current research is directed at the sub-universe of violent pornography.<sup>136</sup> Because no data exist on the distribution of that sub-universe of pornography, its relation to actual rape rates is impossible to test. Moreover, if only violent pornography has a causal link with rape, the link may be with the portrayal of violence rather than sex. As Steven Childress has concluded with respect to harmful effect, "Of sex, sexual violence, and violence, the least of these is sex."<sup>137</sup>

Of course, even if no type of pornography has an effect on rape rates—or if pornography actually depresses rape rates—one may favor restricting pornography on other grounds.

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at 99 (criticizing the "almost schizophrenic dissociation" between the Commission's findings and the research it relied on); Scott & Schwalm, *supra*, at 242-43 (noting that the Commission tended to reach conclusions "based on little scientific evidence but rather strong personal feelings").

134. The Scott and Schwalm study omitted any gender variable at all, thus creating a strong possibility that correlations between rape rates and pornographic magazine circulation are simply a proxy for the ratio of males to females in state populations. See Scott & Schwalm, *supra* note 133, at 246 (finding statistically significant correlations between rape rates and three variables: circulation of sex magazines, poverty levels, and the percent of a state considered to be a standard metropolitan area).

135. See *supra* Table 6 (indicating  $p < .553$ ).

136. See, e.g., MEESE COMMISSION, *supra* note 10, at 323-29 (finding a causal relationship between violent pornography and sexual violence); Check & Guloien, *supra* note 89 (comparing the effects of violent pornography, degrading or dehumanizing pornography, and "socially acceptable" erotica).

137. Childress, *supra* note 65, at 212.



The purpose of this Article, however, was to assess empirically the "anti-pornography" syllogism. Two types of evidence would support the syllogism's conclusion that pornography causes rape. One type would be an increase in rape rates that is roughly proportional to the increased consumption of pornography. Although the data used to measure these phenomena are imperfect, no evidence of this type was found. The UCR rape rates have increased much more slowly than the measured increase in pornography consumption, and the arguably more reliable NCS rape rates have generally moved in a direction opposite that of pornography consumption.

The second type of supporting evidence would be a significant correlation between rape rates in the fifty states and pornographic magazine distribution. But this Article has demonstrated that previously found correlations between pornographic magazines and rape rates are not credible. Thus, the best evidence that exists (and it is far from perfect) does not support the empirical claim that pornography causes rape. Because pornography, as defined in this Article,<sup>138</sup> may include some constitutionally protected speech or expression,<sup>139</sup> even somewhat imperfect evidence warrants full consideration on the question of whether to ban pornography.<sup>140</sup> Until better evidence is available, caution dictates that we refuse to act on the unproven empirical claim that pornography causes rape.

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138. See *supra* note 65 and accompanying text.

139. Non-obscene pornography is protected by the First Amendment. See *Miller v. California*, 413 U.S. 15, 23-24 (1973) (defining obscene material as that depicting "patently offensive" sexual conduct, appealing to the "prurient interest," and lacking "serious literary, artistic, political, or scientific value").

140. Recent efforts to legislate against pornography rely on definitions that have a very different focus from the definition of obscenity provided by the Supreme Court. See *Downs*, *supra* note 5, at 114-15 (quoting Minneapolis and Indianapolis ordinances that focus on depictions of women as sexual objects). At a minimum, the different definitions raise the possibility that some pornography would be non-obscene under the Court's current test and, thus, protected by the First Amendment.