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Does Removing the Force Element Matter?: An Empirical Comparison of Rape Statistics in Massachusetts and Colorado

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It is little wonder that rape is one of the least-reported crimes. Perhaps it is the only crime in which the victim becomes the accused and, in reality, it is she who must prove her good reputation, her mental soundness, and her impeccable propriety.

—Freda Adler

INTRODUCTION

In the early 1970s, an unlikely coalition of feminists, victim’s rights advocates, and conservative “law and order” groups came together with a single common goal: to reform the defendant-friendly rape laws in the United States. This coalition was very successful in altering rape statutes across the nation, and by the mid-1980s nearly every state had enacted rape shield laws that made evidence of a victim’s prior sexual history inadmissible. Furthermore, many states

had expanded the number and scope of statutes available to prosecutors in sexual assault cases, and many states had removed the so-called “resistance requirement”—the requirement that a rape victim provide physical resistance to her attacker during the rape in order to be able to press charges.4

While the changes affected by rape reforms of the 1970s and 1980s were vast and nearly universal, many modern rape experts believe that the reforms did not go far enough.5 Several scholarly works have argued that the empirical impact of rape law reforms has been quite limited.6 There is a widely held belief amongst rape scholars that the reformers should have removed the element of force: the requirement that an attacker must have used physical force or the threat of physical force to commit the rape in order for that attacker to be convicted.7 Despite this scholarly consensus, a majority of states still retain force requirements in their rape statutes involving penetration.8 Some states, however, such as Georgia, Florida, and Colorado, have completely removed the force requirement from their rape statutes.9

This Note will compare rape statistics in Massachusetts, a jurisdiction whose rape statute contains a heavily entrenched force element, to those in Colorado, a jurisdiction whose rape statute does not contain a force element. In comparing these statistics, this Note will argue that there is some empirical evidence suggesting that removing the force requirement from Colorado’s rape statutes may have affected its rape reporting rate, both in comparison to the rape reporting rate of Massachusetts and the nation as a whole. This Note will further examine a number of potential reasons for the differences between the rape reporting rates of Colorado and Massachusetts and will hypothesize that Colorado’s removal of the force requirement from its rape statute may have had a practical effect.

I. BACKGROUND OF RAPE LAW REFORM IN AMERICA

Historically, rape cases in America have been handled in a defendant-friendly fashion because of a lingering idea that rape is

4. Id. at 118-19.
5. See id. at 120.
6. Id. at 129–51; Bachman & Paternoster, supra note 2, at 573–74; David P. Bryden & Sonja Lengnick, Rape in the Criminal Justice System, 87 J. CRIM. L. & CRIMINOLOGY 1194, 1228 (1997).
9. Id. at 1084, 1084 n.12.
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a crime particularly susceptible to false accusations.\textsuperscript{10} The traditional elements of rape as inherited from English common law were (1) carnal knowledge of a woman; (2) not one’s wife; (3) by force; and (4) against her will.\textsuperscript{11} These elements were construed particularly harshly against victims accusing their attackers of rape, in part due to an attitude put into words perfectly by Sir Matthew Hale, Lord Chief Justice of the King’s Bench: “‘rape is an accusation easy to be made, hard to be proved, and harder to be defended by the party accused though ever so innocent.’”\textsuperscript{12}

Many pre-reform rape trials tended to focus on the sexual history and moral characteristics of the victim rather than the alleged actions of the accused, in large part due to widespread male skepticism about the veracity of rape accusations and the potential for false convictions.\textsuperscript{13} For this reason, there was also a “corroboration requirement,” prohibiting a rape conviction on the uncorroborated testimony of the victim.\textsuperscript{14} Also, because intercourse had to be against the victim’s will to classify as rape, there was a “resistance requirement” read into rape cases: a victim was required to physically resist her attacker to the “utmost” to prove that the intercourse was, in fact, against her will.\textsuperscript{15}

In the 1970s and 1980s, several disparate groups came together to try to reformulate rape laws in America. Feminists, victims’ advocacy groups, and conservative “law and order” groups may have had little in common, but each had a vested interest in making American rape laws tougher and less defendant-friendly.\textsuperscript{16}

Feminist and victims’ advocacy groups resented inquiries into a victim’s sexual history, because such inquiries tended to turn rape trials into embarrassing evaluations of the victim’s conformation with societal expectations of chastity rather than legitimate inquiries into the guilt or innocence of the accused.\textsuperscript{17} Feminists found that the resistance requirement cast all women into one of two distinct subservient gender roles in which they were either forbidden from exercising any sexual agency or were classified as sex objects with no right to resist the sexual advances of men.\textsuperscript{18} Feminists also disapproved of the corroboration requirement, because it reinforced the stereotype of

\textsuperscript{10} Bachman & Paternoster, \textit{supra} note 2, at 558.
\textsuperscript{11} Horney & Spohn, \textit{supra} note 3, at 118.
\textsuperscript{12} Bachman & Paternoster, \textit{supra} note 2, at 558 (quoting \textsc{Matthew Hale}, \textit{The History of the Pleas of the Crown} 634–35 (1847)).
\textsuperscript{14} Horney & Spohn, \textit{supra} note 3, at 119.
\textsuperscript{15} Aya Gruber, \textit{Rape, Feminism, and the War on Crime}, 84 WASH. L. REV. 581, 588–89 (2009).
\textsuperscript{16} Bachman & Paternoster, \textit{supra} note 2, at 554.
\textsuperscript{17} Gruber, \textit{supra} note 15, at 587–93.
\textsuperscript{18} \textit{Id.} at 588–89.
the “lying vindictive shrew,” a jilted girlfriend or lover who used false allegations of rape to punish a man for leaving her or wronging her. 19

Meanwhile, in the 1970s and 1980s, conservative groups were upset with American rape laws based on a number of well-known rape cases with seemingly unjust outcomes favoring defendants. 20 Cases such as North Carolina v. Alston, 21 Rusk v. Maryland, 22 and Illinois v. Warren 23 garnered much scholarly attention and underscored just how inconsistent and defendant-friendly American rape laws could be. 24

Beginning in the mid-1970s, states began to change their rape statutes to accommodate the rights of rape victims and address some of the issues raised by the coalition of feminist groups, victims’ rights advocacy groups, and conservative groups. 25 In 1974, Michigan became the first state to enact wholesale changes to its rape statutes. 26 Michigan enacted what has become known as a “rape shield” into its Sexual Conduct Statute, which completely prohibited the admissibility at trial of evidence of the victim’s sexual history with third parties. 27 Michigan’s rape law reform catalyzed the national rape reform process and by the mid-1980s, every state had reformed its rape statutes in one way or another. 28 Some of the most common reforms included broadening the definition of rape, removal of the resistance and corroboration requirements, and installation of rape shield laws. 29

Despite this national drive to reform rape laws, a majority of states have not removed the force requirement from their rape statutes in rapes involving penetration. 30 This is problematic because most rape scholars believe that the force requirement should be removed

19. Id. at 589–90.
21. 312 S.E.2d 470, 472–73, 476 (N.C. 1984) (ruling that a woman who was bullied into accompanying her ex-boyfriend to a friend’s house and having sex had not been raped, despite the fact that she had told the ex-boyfriend “no . . . I wasn’t going to bed with him,” and she cried during the intercourse).
22. 406 A.2d 624, 625–26, 628 (Md. Ct. Spec. App. 1979), rev’d, 424 A.2d 720 (Md. 1981) (holding that a woman had not been raped, despite the fact that a woman who was giving an acquaintance a ride home was essentially forced into the acquaintance’s apartment because he took her car keys and refused to return them, and then bullied into intercourse by general threatening behavior).
23. 446 N.E.2d 591, 594 (Ill. App. Ct. 1983) (reversing a rape conviction, ruling the victim’s failure to physically resist her attacker conveyed the impression of consent regardless of her mental state).
25. Bachman & Paternoster, supra note 2, at 559.
26. Id.
29. Horney & Spohn, supra note 3, at 118.
30. Decker & Baron, supra note 8, at 1084–85; Bienen, supra note 27, at 171–72.
in the same way the resistance and corroboration requirements were removed.\textsuperscript{31} It is also problematic because although a vast majority of states have abolished the resistance requirement, requiring a showing of force essentially maintains the resistance requirement in acquaintance rape cases.\textsuperscript{32} Some states, such as Georgia, Florida, and Colorado have removed the force element from their rape statutes.\textsuperscript{33} Other states, including New Jersey, have constructively removed the force requirement through judicial action by ruling that the force used to achieve penetration is enough to provide the force required by statute.\textsuperscript{34} In most jurisdictions in America, however, the force requirement is alive and well.\textsuperscript{35}

\section*{II. RAPE LAWS IN MASSACHUSETTS AND COLORADO}

This Note focuses on the empirical impact of the rape statues in Massachusetts and Colorado, and specifically whether the removal of the force requirement from the states’ respective rape statutes has made a tangible, statistical difference. Massachusetts was selected because it maintains a force requirement in its rape statute,\textsuperscript{36} and because recent cases such as \textit{Suliveres v. Commonwealth}\textsuperscript{37} have vigorously upheld the force standard. Colorado was selected because its rape statute is one of the clearest examples of a statute that is consent-based and contains no overt or hidden force requirement.\textsuperscript{38} Before examining the empirical statistics, this Note will examine the intricacies of each state’s rape statutes and evaluate what legal factors have contributed to differences in statistics gathered in each jurisdiction.

\subsection*{A. Rape Law in Massachusetts}

The Massachusetts rape statute reads, in relevant part, “Whoever has sexual intercourse or unnatural sexual intercourse with a person, and compels such person to submit \textit{by force} and against his will, or

\begin{itemize}
  \item \textsuperscript{31} Bryden, \textit{supra} note 7, at 322.
  \item \textsuperscript{32} \textit{Id.} at 356 (“In most cases involving acquaintances the force element is, in effect, a resistance requirement. This is because an unarmed acquaintance rapist typically does not employ force unless he meets resistance. If the woman does not resist, he will simply have intercourse with her, and the great majority of courts do not regard the sexual act itself as inherently forcible.”).
  \item \textsuperscript{33} Decker & Baroni, \textit{supra} note 8, at 1084, 1084 n.12.
  \item \textsuperscript{34} \textit{See Rape Law—Lack of Affirmative and Freely-Given Permission—New Jersey Supreme Court Holds That Lack of Consent Constitutes “Physical Force”}, 106 HARV. L. REV. 969, 969 (1993) [hereinafter \textit{Rape Law}].
  \item \textsuperscript{35} Decker & Baroni, \textit{supra} note 8, at 1084–85.
  \item \textsuperscript{36} MASS. ANN. LAWS ch. 265, § 22 (LexisNexis 1998).
  \item \textsuperscript{37} 865 N.E.2d 1086, 1091 (Mass. 2007).
  \item \textsuperscript{38} COLO. REV. STAT. ANN. § 18-3-402 (West 2013).
\end{itemize}
compels such person to submit by threat of bodily injury . . . shall be punished by imprisonment . . . .”39 The statute as it is currently written was drafted in 1974 and amended in minor fashion in 1980 and 1998.40 However, neither the 1980 nor the 1998 revision made any changes to the language surrounding the force requirement; the 1980 revision subdivided rape cases into those involving serious physical injury to the victim and those not involving such injury (while maintaining the force standard), and the 1998 revision added increased penalties for repeat offenders and offenders using firearms.41

The Massachusetts rape statute includes both force (“by force”) and consent (“against his will”) elements. The landmark case of Suliweres v. Commonwealth recently upheld the force requirement in Massachusetts in a fashion similar to how the force requirement has historically been applied.42 In that case, the Massachusetts Supreme Court upheld a 1959 ruling that sexual intercourse procured by means of fraud is not considered rape because it is lacking the extrinsic force element required by statute.43 The court maintained the strict nature of the force requirement in the Massachusetts rape statute, and denied the prosecution’s request to alter Massachusetts’s rape statute in the way New Jersey had previously altered its statute, by allowing the force required to achieve penetration to fulfill the force requirement.44 This decision was instrumental in maintaining the “purity” of the force requirement in Massachusetts’s statute.45

Other cases in Massachusetts have also upheld the force requirement in that state’s rape statutes. In Commonwealth v. Goldenberg,46 the 1959 case affirmed by Suliweres, the Massachusetts Supreme Court held that sexual intercourse obtained by fraud was not rape per se, because in order for sexual intercourse to be considered rape, the defendant must have used force or the threat of force.47 Similarly, in Commonwealth v. Lopez,48 a 2001 Massachusetts Supreme Court case, the court held that in Massachusetts, “unless the putative victim has been rendered incapable of consent, the prosecution must prove that the defendant compelled the victim’s submission by use of physical force; nonphysical, constructive force; or threat of force.”49

40. Id.
41. Id.
42. Suliweres, 865 N.E.2d 1086, 1091 (Mass. 2007).
43. Id. at 1089–91.
44. Id. at 1089–90 (“[W]e are not free, any more than we were in the Goldenberg case, to adopt the Commonwealth’s proposed interpretation.”).
45. See id. at 1089.
47. Id. at 191–92.
49. Id. at 966.
Numerous other Massachusetts rape cases have similarly upheld the force requirement in Massachusetts, making the state a prime example of a jurisdiction with a force requirement.

B. Rape Law in Colorado

The Colorado sexual assault statute reads, in relevant part, “(1) Any actor who knowingly inflicts sexual intrusion or sexual penetration on a victim commits sexual assault if: (a) The actor causes submission of the victim by means of sufficient consequence reasonably calculated to cause submission against the victim’s will. . . .” The statute was enacted in its modern form in 1973, and the force requirement for second-degree assault was removed by 1985. The force requirement was abandoned completely by 2000.

The Colorado rape statute has no force requirement, and is completely consent-based. According to the statute, a rape occurs if the perpetrator has intercourse with the victim “against the victim’s will.” The Colorado criminal code defines consent as, “cooperation in fact or attitude pursuant to an exercise of free will and with knowledge of the nature of the act,” and provides examples of acts that do not constitute consent, such as the status of currently or formerly being in a relationship with a person, or submitting under the influence of fear. Colorado’s rape statute has absolutely no force requirement, unlike some states that do not have force requirements in the language of their rape statutes but have implicit force requirements built into their statutes via language in the definitional sections. Such states require some showing of force by the attacker or resistance by the victim in order for their statutes to apply.

Case law in Colorado confirms that force has not been a required element in convicting defendants of rape. For example, in People v. Santana-Medrano, the Colorado Court of Appeals held that while the

52. See Apodaca v. People, 712 P.2d 467, 472 n.7 (Colo. 1985).
55. Decker & Baroni, supra note 8, at 1088 (quoting Colo. Rev. Stat. § 18-3-401 (2003)).
56. Id. at 1088–89.
57. Id.
58. Id. at 1088–90.
level of force used in a rape could affect which degree of felony could be charged, the element of force was not a necessary component of the state’s general sexual assault statute.60 Similarly, in *People v. Lehmkul*61 the Colorado Court of Appeals held that while the use of a deadly weapon in the course of a rape would automatically show that the intercourse was against the victim’s will, there were “different methods by which submission of the victim is obtained,” including non-forceful ones.62 The only difference the court noted was that non-forceful means of obtaining the victim’s submission might lead to a lesser degree of felony charged.63 Colorado case law shows that while the use of force might affect the sentencing of a person convicted of rape, there is no force requirement in Colorado’s sexual assault statute.

III. EMPIRICAL RAPE STATISTICS FROM MASSACHUSETTS AND COLORADO

According to the 1996 National Violence Against Women Survey (NVAWS), 17.6 percent of American women and 3 percent of American men said they had been the victims of a completed or attempted rape.64 However, according to the survey, only 19.1 percent of women and 12.9 percent of men reported these rapes to the authorities, and only 43.3 percent of the reported rapes led to the arrest or detention of the accused rapist.65 Furthermore, according to the survey, only 37 percent of the rapes against women that were reported to the police resulted in criminal prosecution, and those prosecutions led to only 46.2 percent of the prosecuted rapists being convicted of a crime.66 This extremely high rate of victimization and low rate of conviction suggests that America has an as-of-yet unsolved problem on its hands.

Very little empirical analysis has been conducted on rape rates and the effect of rape statutes,67 in part because the rape statistics available to researchers are notoriously untrustworthy.68 Detailed statistics on rape reporting and arrest rates are widely available, but they do not show how many rapes actually occur, can vary depending

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60. *Id.* at 806.
62. *Id.* at 106.
63. *Id.*
65. *Id.* at 33.
66. *Id.*
on what body collected them, and do not include conviction rates.69 The FBI releases an annual table containing estimates of how many actual rapes there are per year in individual regions of the United States,70 but the posted methodology of these tables shows that they are little more than dead-reckoning.71 Furthermore, there are a wide variety of estimations of how many rapes go unreported.72 For example, the Rape Abuse & Incest National Network claims 68 percent of sexual assaults go unreported,73 the NVAWS suggested that just over 80 percent of rapes of women go unreported,74 and West Virginia University estimates that 50 to 90 percent of rapes go unreported.75

This Note focuses on the empirical differences between the rape statistics in Massachusetts and those in Colorado and what implications those statistics may have on whether the removal of the force requirement has made a tangible difference. Much of the focus of the statistical analysis of this Note will be on reporting rates. This Note will take into account current and historical rape reporting rates to see if removing the force requirement is a useful tool for prosecutors, and whether it has made a difference historically. This Note will also estimate how many rapes were committed in each jurisdiction in order to see if the removal of the force requirement has had an effect on how law enforcement handles rape cases and how the public views rape and rape reporting.

A. Massachusetts Rape Statistics

Below are a chart and a graph to illustrate the statistics that are referenced in this section.


72. See infra notes 73–75.


74. NIJ Report, supra note 64, at 34. Number calculated by author based on percentage of rapes that were reported.

MASSACHUSETTS RAPE STATISTICS TABLE

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<tr>
<td>2008</td>
<td>1744</td>
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<td>2009</td>
<td>1734</td>
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<td>2010</td>
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<td>2011</td>
<td>1654</td>
<td>25</td>
<td>84175</td>
<td>27</td>
</tr>
<tr>
<td>2012</td>
<td>1650</td>
<td>24.8</td>
<td>85141</td>
<td>26.9</td>
</tr>
</tbody>
</table>

## Graph

![Graph of Ratio of MA Rape Rate to National Rape Rate](image.png)
In 2012, Massachusetts had a population of 6,645,303.\textsuperscript{77} During that time, approximately 1,650 rapes were reported to police, comprising a reported rape rate of 24.8 rapes per 100,000 population.\textsuperscript{78} According to the reporting rate estimates above,\textsuperscript{79} this could mean that there were anywhere from 3,300 to 16,500 actual rapes committed in Massachusetts in 2012. Because the NVAWS tends to be one of the most well-respected statistical compilations,\textsuperscript{80} this Note will utilize the roughly 20 percent reporting standard\textsuperscript{81} and approximate that 8,250 rapes actually occurred in Massachusetts in 2012. Furthermore, in 2012 the FBI estimates that there were 243 arrests for rape in Massachusetts,\textsuperscript{82} meaning that 14.7 percent of reported rapes and 2.9 percent of estimated actual rapes resulted in an arrest. Based on the NVAWS estimate that 46.2 percent of rapes that were prosecuted ended in conviction,\textsuperscript{83} approximately 6.8 percent of reported and 1.3 percent of overall rapes resulted in a conviction in Massachusetts in 2012.\textsuperscript{84}

Historically, Massachusetts has had a rate of reported rapes lower than the national average.\textsuperscript{85} For instance in 1960, Massachusetts had a reported rape rate of 4.8 per 100,000 population.\textsuperscript{86} In that same year, the United States had a reported rape rate of 9.6 per 100,000 population,\textsuperscript{87} double that of Massachusetts. Fifteen years later in 1975,  

\textsuperscript{77.} Massachusetts Crime Rates, supra note 76.  
\textsuperscript{78.} MASSACHUSETTS RAPE STATISTICS TABLE, supra Part III.A.  
\textsuperscript{79.} See supra notes 73–75, showing that between 50 and 90 percent of rapes go unreported according to different organizations’ estimates.  
\textsuperscript{80.} DEAN G. KILPATRICK & KENNETH J. RUGGIERO, RAPE IN MASSACHUSETTS: A REPORT TO THE COMMONWEALTH 1 (Apr. 9, 2003), available at http://www.musc.edu/ncvc/grants/50_states_reports/massachusetts.pdf, archived at http://perma.cc/HR2U-XPBC (“After reviewing several national sources of information about rape, we determined that the most methodologically sound information comes from the National Women’s Study (NWS) and the National Violence Against Women Survey (NVAWS).”).  
\textsuperscript{81.} NIJ Report, supra note 64, at 33 (estimating that 80 percent of rapes in America go unreported). Due to the estimates in the well-respected NIJ report, this Note will proceed under the assumption that approximately one fifth of actual rapes are reported, and thus the number of actual rapes is roughly equal to five times the number of reported rapes.  
\textsuperscript{83.} NIJ Report, supra note 64, at 33.  
\textsuperscript{84.} Id.; Massachusetts Crime Rates, supra note 76. Since there is no available data on how many rape arrests led to prosecution, this Note will make the (perhaps naïve) assumption that all rape arrests led to prosecution. The NIJ report estimates that 46.2 percent of rapes that were prosecuted ended in conviction. Based on the estimated 243 rape arrests that occurred in Massachusetts, there were approximately 112 convictions for rape in Massachusetts in 2012. This number is equal to 6.8 percent of the number of reported rapes (1,650), and 1.3 percent of the number of estimated actual rapes (8,250).  
\textsuperscript{85.} See MASSACHUSETTS RAPE STATISTIC TABLE, supra Part III.A.  
\textsuperscript{86.} Id.  
\textsuperscript{87.} Id.
in the height of the rape reform era, Massachusetts had a reported rape rate of 19.2 per 100,000 population,\textsuperscript{88} as compared to a national rate of 26.3 per 100,000 population.\textsuperscript{89} Over those fifteen years, the reported rape rate in Massachusetts had quadrupled, and it had moved from 50 percent to 73 percent of the nationally reported rape rate.\textsuperscript{90}

Fifteen more years later, in 1990, the reported rape rate in Massachusetts was 33.7 per 100,000 population,\textsuperscript{91} while the reported national rape rate was 41.2 per 100,000.\textsuperscript{92} In that period, the reported rape rate in Massachusetts was 75 percent higher than it had been fifteen years previous, and had risen to about 81 percent of the national reported rape rate. Finally, in 2012, Massachusetts had a reported rape rate of 24.8 per 100,000 population,\textsuperscript{93} as compared to a national reported rape rate of 26.9 per 100,000.\textsuperscript{94} In that twenty-two-year time period, the reported rape rate had fallen by 26.7 percent but had risen to be about 92 percent of the national reported rape rate.\textsuperscript{95} Although the reported rape rate in Massachusetts fluctuated in line with national trends, it tended to rise steadily in proportion to the national reported rape rate between 1960 and 2012.\textsuperscript{96}

B. Colorado Rape Statistics

A chart and a graph have been attached below to better illustrate the statistics that are referenced in this section.

COLORADO RAPE STATISTICS TABLE\textsuperscript{97}

<table>
<thead>
<tr>
<th>Year</th>
<th>CO Total Reported Rapes</th>
<th>CO Rape Report Rate (per 100,000 population)</th>
<th>USA Total Reported Rapes</th>
<th>USA Rape Report Rate (per 100,000 population)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1960</td>
<td>229</td>
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<tr>
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<td>12.9</td>
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</table>

\textsuperscript{88} Id.
\textsuperscript{89} Id.
\textsuperscript{90} Id.
\textsuperscript{91} MASSACHUSETTS RAPE STATISTIC TABLE, supra Part III.A.
\textsuperscript{92} Id.
\textsuperscript{93} Id.
\textsuperscript{94} Id.
\textsuperscript{95} Id.
\textsuperscript{96} Id.

<table>
<thead>
<tr>
<th>Year</th>
<th>CO Total Reported Rapes</th>
<th>CO Rape Report Rate (per 100,000 population)</th>
<th>USA Total Reported Rapes</th>
<th>USA Rape Report Rate (per 100,000 population)</th>
</tr>
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<td>1999</td>
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<td>89411</td>
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<tr>
<td>2000</td>
<td>1774</td>
<td>41.2</td>
<td>90178</td>
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In 2012, Colorado had a population of 5,189,458.\textsuperscript{98} During that time, approximately 2,122 rapes were reported to police, comprising a reported rape rate of 40.9 rapes per 100,000 population.\textsuperscript{99} According to the NVAWS estimated reporting standard, roughly 20 percent,\textsuperscript{100}

\begin{table}
\centering
\begin{tabular}{|c|c|c|c|c|}
\hline
Year & CO Total Reported Rapes & CO Rape Report Rate (per 100,000 population) & USA Total Reported Rapes & USA Rape Report Rate (per 100,000 population) \\
\hline
2001 & 1930 & 43.6 & 90863 & 31.8 \\
2002 & 2066 & 45.9 & 95235 & 33.1 \\
2003 & 1913 & 42.1 & 93883 & 32.3 \\
2004 & 1945 & 42.3 & 95089 & 32.4 \\
2005 & 2026 & 43.4 & 94347 & 31.8 \\
2006 & 2076 & 43.7 & 92757 & 30.9 \\
2007 & 1998 & 41.1 & 90428 & 30 \\
2008 & 2094 & 42.4 & 90479 & 29.8 \\
2009 & 2269 & 45.2 & 89241 & 29.1 \\
2010 & 2230 & 44.2 & 85593 & 27.7 \\
2011 & 2285 & 44.7 & 84175 & 27 \\
2012 & 2122 & 40.9 & 85141 & 26.9 \\
\hline
\end{tabular}
\end{table}

\begin{figure}
\centering
\includegraphics[width=\textwidth]{ratio_of_co_rape_rate_to_national_rape_rate}
\caption{Ratio of CO Rape Rate to National Rape Rate}
\end{figure}

\textsuperscript{98} Colorado Crime Rates, supra note 97.
\textsuperscript{99} Id.
\textsuperscript{100} NIJ Report, supra note 64, at 133.
the approximate number of actual rapes that occurred in Colorado in 2012 was 10,610.\textsuperscript{101} Furthermore, in 2012 the FBI estimates that there were 333 arrests for rape in Colorado,\textsuperscript{102} meaning that 15.7 percent of reported rapes and 3.1 percent of estimated actual rapes resulted in an arrest.\textsuperscript{103} Based on the NVAWS estimate that 46.2 percent of rapes that were prosecuted ended in conviction,\textsuperscript{104} approximately 7.3 percent of reported and 1.5 percent of overall rapes resulted in a conviction in Colorado in 2012.\textsuperscript{105}

Historically, Colorado has almost always had a rate of reported rapes rate higher than the national average.\textsuperscript{106} For instance in 1960, Colorado had a reported rape rate of 13.1 per 100,000 population.\textsuperscript{107} In that same year, the United States had a reported rape rate of 9.6 per 100,000 population.\textsuperscript{108} Colorado had a reported rape rate 1.36 times that of the nationally reported rape rate.\textsuperscript{109} Fifteen years later in 1975, in the height of the rape reform era, Colorado had a reported rape rate of 41.5 per 100,000 population,\textsuperscript{110} as compared to a national rate of 26.3 per 100,000 population.\textsuperscript{111} Over those fifteen years, the reported rape rate in Colorado had more than tripled, and it had moved from 1.36 times the national rate to 1.58 times of the nationally reported rape rate.\textsuperscript{112}

Fourteen more years later, in 1989, the reported rape rate in Colorado was 36.2 per 100,000 population,\textsuperscript{113} while the reported national rape rate was 38.1 per 100,000.\textsuperscript{114} In that period, the reported rape rate in Colorado was 13 percent lower than it had been fourteen years previous, and for the only time between 1960 and 2012 had fallen below the nationally reported rape rate, to 95 percent of the national rate.\textsuperscript{115} Finally, in 2012, Colorado had a reported rape rate of 40.9 per
100,000 population,\textsuperscript{116} as compared to a national reported rape rate of 26.9 per 100,000.\textsuperscript{117} In that twenty-three-year time period, the reported rape rate had risen by 12.4 percent and had risen to be 1.51 times the national reported rape rate.\textsuperscript{118} The reported rape rate in Colorado was almost always higher than that of the United States as a whole.\textsuperscript{119} However, it mostly fluctuated in line with national trends.\textsuperscript{120} Colorado’s rape rate hit its nadir as compared to the national reported rape rate in 1989,\textsuperscript{121} and has been on the incline in recent years.\textsuperscript{122}

C. Comparison of Massachusetts and Colorado Rape Statistics

Two graphs have been attached below to better illustrate the statistics that are referenced in this section.

\begin{figure}
\centering
\includegraphics[width=\textwidth]{historical_rape_rates.png}
\caption{Historical Rape Rates}
\end{figure}

\begin{tabular}{llll}
\textbf{Year} & \textbf{CO Rape Rate} & \textbf{MA Rape Rate} & \textbf{USA Rape Rate} \\
\hline
1981 & 10 & 20 & 50 \\
1985 & 15 & 30 & 60 \\
1990 & 20 & 40 & 70 \\
1995 & 25 & 50 & 80 \\
2000 & 30 & 60 & 90 \\
2005 & 35 & 70 & 100 \\
2010 & 40 & 80 & 110 \\
2015 & 45 & 90 & 120 \\
\end{tabular}

\textsuperscript{116} Id.
\textsuperscript{117} Id.
\textsuperscript{118} Id.
\textsuperscript{119} \textsc{Colorado Rape Statistics Table, supra} Part III.B.
\textsuperscript{120} Id.
\textsuperscript{121} Id.
\textsuperscript{122} Id.
There are a few pronounced differences in the rape statistics of Massachusetts and Colorado. Most obviously, Colorado consistently had a higher reported rape rate. In 1960, Colorado's rape rate was almost three times that of Massachusetts.\footnote{Massachusetts Crime Rates, supra note 76; Colorado Crime Rates, supra note 97.} From that point forward, the two rape rates began to converge somewhat, but reported rape rates in Colorado always outstripped those in Massachusetts, and usually by a fairly large margin. For instance, in 1975, Colorado's rape reporting rate was still more than double that of Massachusetts.\footnote{Id.} In 1989, the year that the two states’ rape rates were closest in value, Colorado's rape reporting rate was 114 percent of Massachusetts's rape rate.\footnote{Id.} However, by 2012 that figure had climbed back up to 165 percent.\footnote{Id.} At all points, Colorado had a higher reported rape rate, although there was some fluctuation in the ratio between the two, especially in the late 1980s and early 1990s.\footnote{Id.}

The two jurisdictions' rape rates also differed in their relationship to the national average. Between 1960 and 2012, Massachusetts had a rape rate that was always lower than the national average, but was also fairly consistently rising in comparison to the national average.\footnote{See MASSACHUSETTS RAPE STATISTICS TABLE, supra Part III.A.}

\begin{figure}[h]
\centering
\includegraphics[width=\textwidth]{Ratio_of_MA_Rape_Rate_to_CO_Rape_Rate.png}
\caption{Ratio of MA Rape Rate to CO Rape Rate}
\end{figure}
Massachusetts’s rape rate was 50 percent of the national average in 1960 and rose to 92 percent of the national average in 2012, and rose fairly steadily in the interim. On the other hand, Colorado’s rape rate fluctuated more intensely in relation to the national average. It reached a peak of 193 percent of the national rate in 1970, then dipped below the national average to 95 percent in 1989. Colorado’s rate has been rising in relation to the national rate ever since, to the point where it reached 152 percent in 2012.

While the rape rates in Massachusetts and Colorado had some significant differences, there were also some similarities. The rape rates in both jurisdictions seemed to fluctuate more or less in line with national trends. Both jurisdictions saw their rape rates increase fairly steadily between 1960 and the early 1990s, and both saw their rape rates taper off a bit between the early 1990s and 2012. Colorado’s rape rate was a bit more volatile from year to year and had more peaks and valleys, whereas Massachusetts’s changing rape rates happened more incrementally. However, each followed the national pattern to varying degrees.

IV. DISCUSSION AND ANALYSIS

A. Significance of Differences in Massachusetts’s and Colorado’s Statistics

In analyzing whether the construction of the rape statutes in Massachusetts and Colorado has made an empirical difference, there are several factors that must be taken into account. First, and most obviously, is the fact that Colorado consistently had a higher reported rape rate than Massachusetts, both in the most recent year in which statistics were gathered, 2012, and every year since 1960. At first blush, this seems significant. If such a correlation were caused by the difference in rape statutes across the two jurisdictions, this Note would be free to speculate as to the explanation behind the higher rape rate in Colorado, the state without the force requirement. However, the analysis is not so simple. Causation cannot be implied merely on the basis of observed correlation. Correlations are frequently “spurious,”

129. Id.
130. See Colorado Rape Statistics Table, supra Part III.B.
131. Id.
132. See supra Parts III.A–B.
133. See discussion, supra Parts III.A–B.
meaning that they occur not due to the cause at issue in the study, but instead due to outside factors or “common causes.”

In this case, it seems that the correlation between Colorado, the state without the force requirement in its statute, and the higher rape reporting rate is spurious. Colorado had a significantly higher rape reporting rate than Massachusetts in the 1960s, before the rape reform era and before Colorado changed its rape statutes to excise the force requirement. That means it is likely that the difference in observed rape rates, at least in terms of Colorado consistently having a higher rape rate than Massachusetts, is likely due to jurisdictional differences rather than the presence or lack of a force requirement. Colorado, for whatever reason, is a jurisdiction that tends to have a higher reported rape rate.

While the mere fact of Colorado’s higher rape rate is almost certainly a spurious correlation, this does not mean that there cannot be genuine correlations between some of the empirical data in this Note and the force requirement. Every statistical relationship is unique, and each has a “specific causal structure” which can be used to evaluate if a correlation is genuinely associated with a particular cause. Here, it seems that the fluctuation of the ratio of Massachusetts’s rape reporting rate to Colorado’s rape rate may have been caused, at least in part, by the statutory differences in the two jurisdictions. The chart above, entitled “Ratio of MA Rape Rate to CO Rape Rate” shows that in the mid-1970s, around the time rape statutes in the United States began to be reformed, the ratio of Massachusetts’s rape rate to Colorado’s rape rate was hovering around 50 percent. By the late 1980s and early 1990s, that ratio had ballooned to nearly 90 percent. From that point, the ratio fell and has settled around 60 percent for the past few years.

Based on that fairly extreme fluctuation in ratio, it seems likely that something of statistical significance happened between the mid-1970s and the late 1980s, and then between the early 1990s and present day. “Significance is a statistical term that tells how sure you are that a difference or relationship exists.” While statistical significance can be affirmatively calculated through a number of different

135. Id. at 366.
137. Aldrich, supra note 134, at 374.
138. See Chart, Ratio of MA Rape Rate to CO Rape Rate, supra Part III.C.
139. See id.
140. See id.
141. See id.
mathematical avenues, such calculations are beyond the scope of this Note. Fortunately, such calculations are not necessary here. The amount of the fluctuation in ratio between Colorado’s rape reporting rate and Massachusetts’s rape reporting rate—from 50 percent to 90 percent and back to 60 percent—is very strong evidence that something measurable, some “difference or relationship” existed. This fluctuation happened over a number of years and involved a large number of data points.

Other factors seem to further suggest that the fluctuations between the mid-1970s and 2012 were significant. The above graph entitled “Ratio of MA Rape Rate to National Rape Rate” shows that Massachusetts’s rape rate was consistently climbing in comparison to the national rape rate, from before the rape reform era, through the height of rape reform and into the present day. However, a starkly contrasting picture is painted by Colorado data. In the above graph entitled “Ratio of CO Rape Rate to National Rape Rate,” Colorado’s rape reporting rate is shown to be at around 160 percent of the national reporting rate in the mid-1970s, the beginning of the rape reform era. Colorado’s reporting rate then drops precipitously to just below the national reporting rate in the late 1980s, and eventually rises back up to be around 160 percent of the national rate in the present day. This set of data confirms that something of statistical significance happened in Colorado’s rape reporting rates (and thus in the empirical difference between the rape reporting rates of Massachusetts and Colorado) between the mid-1970s and the late 1980s and then again between the early 1990s and 2012.

B. Theoretical Explanations for Statistical Differences

As the data make clear, there are two distinct periods in which Colorado’s rape reporting rate had significant trends in comparison to Massachusetts’s rape reporting rate and the national norm. In the period between the mid-1970s and the late 1980s, Colorado’s rape reporting rate fell relative to both the national average and Massachusetts’s rape reporting rate. Then, between 1990 and 2012, Colorado’s rape arrest rate rose relative to both Massachusetts and the national average, and by 2012 it was essentially in the same position relative to Massachusetts and the nation that it had been in the mid-1970s.
These fluctuations beg two questions: first, did the difference in rape statutes contribute to the trends in question? And if so, what effects on rape jurisprudence were effected by the different statutes?

The first question, whether Colorado and Massachusetts’s differing statutes contributed to the trends in question, is difficult to answer. Colorado and Massachusetts clearly have different approaches to rape. This can be gleaned by analyzing their rape statutes, but also by the number of rapes reported in each state between 1960 and 2012. Colorado always had a higher rape reporting rate than Massachusetts and frequently had a much higher rape reporting rate than the national average.\(^{150}\) Clearly, each jurisdiction has a different approach to rape cases and differing expectations to how many rapes are traditionally reported. It is very difficult to tell whether the statutory differences at issue in this Note affected the trends observed.

Many explanations for the observed trends that do not implicate statutory construction are present. For instance, perhaps in the period between 1975 and 1989, Colorado was inundated with police departments and municipal personnel who wanted to make Colorado seem like a nice place to live by skewing the rape statistics downward. Then, perhaps those personnel were replaced in the early 1990s and the numbers gradually returned to the actual level over time once the numbers were no longer being skewed. This scenario is possible but unlikely, as it is difficult to misreport reporting rates, and the numbers gradually increased and decreased relative to the national average, rather than the rapid change one might expect when dishonest officials are replaced by honest ones.

Alternatively, the national average rape reporting rate was at its highest point in the past 50 years during the late 1980s and early 1990s.\(^{151}\) Perhaps Colorado can be expected to follow the national trends up to a certain point, but once the national trend gets too high, the already high Colorado rape reporting rate has no further room to rise. This explanation, while more plausible than the dishonest official explanation above, is still lacking. Colorado’s rape reporting rate in 1989 was at its lowest in the post-rape reform era, which coincided with the national average and Massachusetts nearing their highest ever rates.\(^{152}\) Meanwhile, both the national and Massachusetts rape reporting rates fell consistently between the early 1990s and present day, whereas Colorado’s rate has fluctuated somewhat, but remained fairly constant since the mid-1990s.\(^{153}\)

\(^{150}\) See id.

\(^{151}\) See id.

\(^{152}\) See id.

\(^{153}\) See id.
Based on the timing of the fluctuations it seems more likely that the rape reporting rates of Colorado, Massachusetts, and the nation were affected by the rape reform era as a whole and specifically by the different statutory construction. As explained above, the rape reform era began in the mid-1970s and captured the nation’s attention for the next two decades. Rape reform began with some pioneer states changing their laws in the mid-1970s, continued with the widespread repeal of resistance and corroboration requirements in the 1980s, and the redefinition of the force requirement in some states in the early 1990s. However, the rape reform movement became much less active after the early 1990s, and it became less entrenched in the national psyche. Perhaps Colorado’s force-less rape statute in conjunction with its naturally higher rape reporting rate placed its rape reporting rate in the zone that the rape reform movement aspired to place the national rape rate, and kept it in that zone while the national rate tapered off after rape reform was no longer a hot news topic.

There are compelling reasons to believe the removal of the force requirement from Colorado’s sexual assault statute may have affected its rape reporting rate and its fluctuation from the rates of Massachusetts and the United States. However, it is impossible to prove without better statistics about actual rapes, arrest rates through the decades, conviction rates, and a comparison with the rape rates of other jurisdictions without force requirements that is outside the scope of this Note. This Note therefore cannot definitively show that the difference in rape statutes contributed to the observed statistical trends.

If one nonetheless assumes that Colorado’s removal of the force requirement from its rape statute affected its rape reporting rate, the question becomes how did it do so? Two distinct theories are plausible. The first is that Colorado’s removal of a force requirement from its rape statute led to fewer rape reports as compared to its proportion to the national average between the period of 1975 and 1989. Then, the effect it had wore off in the early 1990s and Colorado’s rape reporting rate gradually increased proportional to the national average, until it had reached the same general ratio it had been when the statute was first reformed in the mid-1970s.

This theory leans heavily on the fact that the national rape reporting rate (and Massachusetts’s rape reporting rate) rose between the

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154. See discussion, supra Part I.
155. Bachman & Paternoster, supra note 2, at 559.
156. Futter & Mebane, supra note 28, at 72–73; Horney & Spohn, supra note 3, at 118–19.
157. Rape Law, supra note 34, at 970.
mid-1970s and the early 1990s and then fell consistently from the mid-
1990s through present day, while Colorado’s rape reporting rate did
not follow that general trend. Instead, Colorado’s rape reporting
rate fell somewhat between the time of its removal of the force require-
ment from its rape statute and the late 1980s, but seemed to gener-
ally fluctuate within a constant range between 1975 and present
day. This theory suggests that Colorado would have followed the
national curve, but for its removal of the force requirement from its
rape statute, which depressed Colorado’s rape reporting rate for a
period of time before gradually losing effect.

This theory is implausible for several reasons. First, while Colo-
rado’s rape reporting rate did not remain constant between 1985 and
2012, it fluctuated within a fairly constricted set of values, with no
apparent trend upward or downward over time. Therefore, Colo-
rado’s rape reporting rate remained relatively constant. A mostly
stable variable, such as Colorado’s rape reporting rate, seems a curious
tool to use to prove that Colorado’s statutory language created a pro-
found effect between 1985 and 1989, and then lost effect between
1989 and 2012. The constancy of the rate seems to defy that particular
explanation. Further, it seems unlikely that the overall effect of remov-
ing the force statute would be to lower the rape reporting rate. After
all, it is a tool that theoretically makes convictions easier to achieve.

One could argue that perhaps removing the force requirement had
such a profound effect that it significantly lowered the actual rape
rate, and the reporting rate fell accordingly. This seems highly un-
likely, and is not supported by the fact that Colorado’s rape report-
ing rate, while falling somewhat in the first few years after the force
requirement was removed from its rape statute, remained relatively
constant over time. It seems more likely that falling reporting rates in-
dicate less justice for rape victims, and that it is unlikely that Colorado
toughening its rape laws would lead to such an outcome.

The second theory for how Colorado’s removal of its force require-
ment empirically affected its rape reporting rate is based in the idea
that removing the force requirement kept—and keeps—rape reform
and justice for rape victims in the forefront of the civic conversation
in the state of Colorado. This theory suggests that Colorado was
always a state that was sensitive to rape victims’ rights as under-
scored by its rape reporting rate that was consistently higher than
the national average. Under this theory, Colorado was a state whose

159. Historical Rape Rates Table, supra Part III.C.
160. See id.
161. See id.
residents reached a level of rape awareness before citizens of other states had fully been exposed to the rape reform movement.

During the period between 1975 and 1989, during which the rape reform movement was in full swing, the level of rape awareness in the country was heightened to such a degree that the national average rape reporting rate rose consistently and even briefly eclipsed Colorado’s rape reporting rate.\(^{162}\) Then, from the mid-1990s until present day when the rape reform era was on the wane and the level of awareness dipped, the national average rape rate fell back to a level near what it had been at the beginning of the rape reform era. There was no corresponding dip in Colorado, because Colorado’s removal of the force requirement served as an emblem of Colorado’s commitment to rape victims’ rights. Colorado’s statutory changes kept the concept of justice for rape victims in the forefront of the thoughts of judges, police, and state employees.

This theory is much more plausible than the first theory. Firstly, it fits the statistical findings better than the first theory. Instead of using a convoluted explanation of how a rate remaining relatively constant was actually akin to that rate falling, it accounts for Colorado’s relatively steady rape reporting rate and the national and Massachusetts rape reporting rates rising between the mid-1970s and early 1990s and falling thereafter. Furthermore, this theory is based in the idea of statutory language being symbolic. Many scholars believe that in rape cases, the actual wording of statutes is relatively unimportant, because juries will tend to judge rape cases based largely on the societal morals of the day.\(^{163}\)

While at first blush this appears to cut against any implication that statutory changes such as removing a force requirement could have a statistical effect on rape reporting rates, it in fact implies the opposite. It shows that the changing of statutory changes in rape cases is often symbolic, but such symbols help to develop and define the societal morals upon which grounds jurors will decide the outcome of rape cases. It may even be that a sense of jurors’ heightened sense of sympathy towards victims of rape encourages victims to report these crimes. The data that could further support this theory is sorely lacking. Actual rape rates and accurate conviction rates would be necessary in further evaluating this theory, and such data is unavailable to the public, and possibly to anyone. However, based on reporting rate data, this is a theory that makes sense and accounts for the statistical findings of this Note.

\(^{162}\) See id.

\(^{163}\) Bryden, supra note 7, at 320, 476–77.
CONCLUSION

Rape statutes and jurisprudence have been in a state of flux in the United States since the rape reform era starting in the 1970s. Some jurisdictions, such as Massachusetts have maintained the traditional requirement that a rapist must use or threaten to use physical force during the rape in order to face potential criminal liability.\textsuperscript{164} In contrast, other jurisdictions such as Colorado have completely removed the force requirement, and categorize all nonconsensual sexual intercourse as rape.\textsuperscript{165}

This Note compiled rape reporting rate statistics from Massachusetts, Colorado, and the United States from the time period between 1960 and 2012. Colorado consistently had a higher rape reporting rate than Massachusetts, and it had a higher rape reporting rate than the United States for every year observed except 1989.\textsuperscript{166} While Colorado’s rape rate fluctuated a bit in either direction, it remained relatively constant during the period between the mid-1970s and 2012.\textsuperscript{167} Both Massachusetts and the United States had rape reporting rates that rose consistently between the mid-1970s and early 1990s (the height of the rape reform era) and then fell consistently between the early 1990s and 2012.\textsuperscript{168}

This Note was unable to decisively determine that the differences in the rape reporting rates of Colorado and Massachusetts or even the fluctuation in their ratio to one another was related to their differing rape statutes. There simply was not enough germane data to fully support that conclusion. Actual rape rates have been the subject of controversy for years, and have notoriously been inaccurately estimated.\textsuperscript{169} Furthermore, accurate conviction data is unavailable for public consumption.\textsuperscript{170} Without this data, the formulation of a defensible causation hypothesis is impossible. If effective empirical research is to be done in the future, better, more accurate data collection methods regarding rape cases need to be employed and made available to the academic community.

\textsuperscript{164} MASS. GEN. LAWS ANN. ch. 265 § 22 (West 2014).
\textsuperscript{165} See COLO. REV. STAT. ANN. § 18-3-402 (West 2013).
\textsuperscript{166} Massachusetts Crime Rates, supra note 76; Colorado Crime Rates, supra note 97; United States Crime Rates, supra note 76.
\textsuperscript{167} See Colorado Crime Rates, supra note 97.
\textsuperscript{168} See Historical Rape Rates Table, supra Part III.C.
\textsuperscript{170} See NIJ Report, supra note 64, at 33.
This Note advanced two theories of how the statutory differences between Massachusetts and Colorado may have affected the statistics. Based on the data, the most likely theory for how the rape reporting rates were affected by the statutory differences (if they were so affected) was based largely upon symbolism. Scholars have contended that rape juries often disregard the letter of the law and base their verdicts on their own senses of morality. Colorado’s removal of the force requirement was a symbolic gesture that helped to shape public morality, and thus potentially kept Colorado’s rape reporting rate consistently high whereas Massachusetts’s rate rose and fell in sync with the prevalence of the rape reform movement in the national consciousness.

Regardless of statistical impact, Colorado’s removal of the force requirement from its rape statute is laudable, because it is a powerful symbolic gesture with the potential to have an empirical impact. This Note was unable to definitively find a link between removal of the force requirement and shifts in the rape reporting rates of Massachusetts and Colorado. However, it advances the philosophy that justice in rape cases is an important goal for the United States, and all measures taken to further this goal, such as Colorado’s abolishment of the force requirement, should be viewed as positive.

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