

On Reducing the Sexual Assault of Women: What Can Economists Contribute to the Debate?

By

Mukesh Eswaran

mukesh.eswaran@ubc.ca

Vancouver School of Economics
University of British Columbia

November 2019, Revised March 2020, Final Revision May 2020

Abstract

In Canada it is estimated that only about 5% of sexual assaults are reported to police and less than 1% of assaults result in convictions. The reasons for this are discussed in this commentary using results from a formal model in economic theory (Eswaran, 2018). In the model, if police over-estimate the probability that women's reports of assault are false, as the evidence clearly documents, they under-investigate. This in turn reduces the reporting of actual assaults and reduces the conviction rate. The attrition rate of active files (as women drop out due to the challenges within and outside the system) may further reinforce the incentive effects of police disbelief. These effects are compounded by the fact that, in Common Law, the Crown prosecutor does not represent the victim but rather the society at large. Policy recommendations that stem from the model include an emphasis on victim advocates, who can increase police belief and hence spur police efforts, as well as reduce attrition rates, leading to more reports and convictions, and fewer assaults. In considering punishments for false reports, it is argued that due consideration must also be given to the effect such a punishment may have in reducing truthful reports and hence in increasing the number of assaults.

Keywords: sexual assault, rape, credibility, criminal justice system, attrition

JEL Codes: J16, K410, K42

Acknowledgements: I am deeply grateful to four anonymous referees of this journal and Nancy Gallini for extensive comments on my earlier paper on which this commentary is based. I also thank Nisha and Hari Eswaran, Nicole Fortin, Grace Gordon, Nisha Malhotra, Hugh Neary, Christine Neill, and Linda Welling. I thank the Indian School of Business, Gachibowli, Hyderabad, for hosting me while part of this paper was being written.

I. Introduction

After Troy fell to the Greeks, princess Cassandra of Troy sought refuge in the temple of goddess Athena—but in vain. The Greek Ajax the Lesser located Cassandra, dragged her away from the statue of Athena she was clinging to, and raped her on the temple’s premises. To add to her many woes, Cassandra had been cursed by Apollo, for rejecting his sexual advances, to be never believed when she revealed anything that she saw as true—as a result of which, whenever Cassandra spoke, she was dismissed as delusional. This commentary is about contemporary women in rich, liberal democracies who are sexually assaulted and seek refuge in the state—but only to be disappointed and possibly victimized again because their allegations are met with disbelief and their seriousness downgraded. Based on the simple model presented in Eswaran (2018), I discuss whether the state is abdicating its responsibility to these women and, if so, how this comes about. I bring out the role of police beliefs in determining their incentives and the consequences of these for women, for the perpetrators of sexual assault, and for the society in general. I end with various policy recommendations that fall out of the analysis.

Only a very small proportion of sexually assaulted women find justice. In Canada, only about 5% of such women report it to the police [Conroy and Cotter (2017)]. Of the police reported cases, Rotenberg (2017, p. 10) finds, using data between 2009 and 2014, that the accused was identified in 59% of the cases, of which 74% were charged, of which 49% proceeded to court, and 55% of these resulted in convictions. From these figures, it follows that only 0.59% of the assaulted women in Canada saw their assailant found guilty. In England and Wales, in 2011 the conviction rate for rape was 1.2%.¹ Based on a sample of 8,000 American women in 1995-96 obtained by the National Violence Against Women Survey, it was found that 17.8% had been raped during the lifetime and 0.3% were raped during the preceding year [Tjaden and Thoennes (2006)]. Among women who were raped since age 18 years, only 7.8% saw their assailants prosecuted, 3.3% were convicted, and 2.2% were jailed (Ibid. p. 33).

Of the cases that victims do not voluntarily drop, based purely on beliefs and hunches the police drop a substantial fraction without investigation [see Johnson (2012) for Canada, Yung (2014) for the U.S., and Kelly et al (2005) for the U.K.].² These cases are labeled as ‘Unfounded’ in North America and ‘No Crime’ in the U.K.³ Of the cases that the police hand over to prosecutors, a substantial number is again dropped because the prosecutors think that there is not

¹ Using data provided by the Ministry of Justice (2013), there were 85,000 women who reported being raped in 2011 and 1058 perpetrators were convicted.

² Sometimes, even rapes kits are not sent to the labs for examination simply because the police believe that there is no truth to the claim of rape [Yung (2014)].

³ For an insightful newspaper exposé on how reports of sexual assault in contemporary Canada are deemed to be unfounded, see Robyn Doolittle’s series, the first of which is “Unfounded: Why police dismiss 1 in 5 sexual assault claims as baseless,” *Globe and Mail*, February 3, 2017.

enough evidence for the juries to convict the accused and also because the victims opt out for other reasons.

The pervasive problem of sexual assault of women is the result of so many causes that it is not productive to presume that any one particular approach is the best. In this paper I examine this serious phenomenon through the lens of an economist. What economists bring to the issue is the focus on incentives. Since incentives, to a large extent, determine behavior, this commentary attempts to work through the effects of the perverse incentives set in motion by erroneous beliefs of the police regarding women's reports on rape. I identify these effects on the actions of the police force, of the lawyers, of the rape victims, and of the perpetrators.

Based on a formal model worked out in Eswaran (2018), I discuss why the conviction rates in cases involving the sexual assault of women are so low and what can be done about it. I shall treat rapes and sexual assaults as synonymous here and as the prototypical crime I analyze.

I identify a feature of the criminal justice system (hereafter CJS) that is crucial to the miscarriage of justice in sexual assault cases: in common law the prosecutor is not the victim's advocate but, rather, prosecutes the accused in the "public interest".⁴ Although the victim does receive some justice if the perpetrator is convicted, when the case is prosecuted in the public interest the benefits accrue largely to society—but much of the costs the victim incurs are private. And these costs, in psychological terms, are large and large precisely because her behavior and character are publicly scrutinized. When her credibility is seriously in question—and *this is what sets apart sexual assault cases from other criminal cases that are also prosecuted in the public interest*—the fact that in common law the victim does not have a private advocate very seriously handicaps her case. This is why "credibility discounting"—a phrase coined by Tuerkheimer (2017), which I adopt—is a hugely important matter, as we shall see. By "credibility discounting" I shall mean the undermining of the credibility or believability of a victim so as to cast doubt on her claim of sexual assault; it facilitates the process of "victim-blaming".

The point of departure in this commentary is the focus on evidence gathering by the police in rape cases and the factors that impinge on it.⁵ Given that rapes usually have no independent witnesses, evidence collection is of paramount importance. Since this is an endogenous choice, the amount collected will depend on the prior beliefs (that is, initial beliefs) of the police regarding the truthfulness of reports of rape. If the putative victims are not believed, the requisite

⁴ The reason why rapes, along with other serious crimes like murder etc. are prosecuted in the public interest is presumably that there are serious externalities involved. The rapist is a danger to society and by getting him off the streets, other women are protected. If the rapist and victim came to a private understanding and settled, this negative externality would not be addressed. See Hubbard (1999) for the benefits and costs of suing in civil court as opposed to the criminal court.

⁵ The importance of evidence collection has been pointed out by Kelly et al (2005), Avalos (2016), Tuerkheimer (2017).

evidence will not be collected. Furthermore, in its rational use of resources, the police force will also have to consider the attrition rate, namely, the proportion of complainants who will not endure the trial to the end, since the investigative efforts of the police have been wasted if the victims drop out of the process. I explicitly incorporate both these factors—credibility discounting and victim attrition—into the discussion. Cynical prior police beliefs about truthful reporting, high rates of attrition through the CJS, and the lack of private legal representation of the victims conspire to bring about an unpalatable outcome. They endogenously reduce the number of sexual assaults reported by genuine victims and, perversely, increase the incentives for false reporting—with the net effect that, by lowering the conviction rate, they encourage more sexual assault. I then briefly discuss why credibility discounting seems to persist as an equilibrium phenomenon even though it is contradicted by the evidence. I finally discuss several policy implications that come out of the analysis.

II. Brief Overview of the Empirical Picture

The possibility of false reports looms large in the law and over the proceedings of rapes in the criminal justice system. False reports, however, are relatively infrequent. When the data used by Clark and Lewis (1977) of rapes in Toronto are carefully scrutinized, the rate of false reporting turns out to be 6%. Using data from a 2005 British Home Office study and meticulously reclassifying the 2,653 rape cases, Kelly et al (2005) found that 2.5% were false reports in England. Heenan and Murray (2006), after examining 850 rape reports over a 3-year period in the province of Victoria in Australia found that the rate of false reporting was 2.1%. Lisak et al (2010) carefully examined all the rape cases of a northeastern university in the United States.⁶ The authors found that the rate of false reporting was 5.9%. In a meta analysis of seven studies on confirmed false reporting, Ferguson and Malouff (2016) find that the rate of false reporting is 5.2%.

In sharp contrast to the above figures derived from careful classification of sexual assault reports, police beliefs about the rate of false reporting are wildly off the mark. In a study by Feldman-Summers and Palmer (1980), police officers in the U.S. believed that 60% of the reports on rape are false. Until the early 1980s, police officers in England and Wales were told during training to expect 60% of the reports of rape to be false [Stern (2010, p. 59)]. Temkin (1997), on interviewing police officers in Sussex, England, found that they believed 25% of the rape reports

⁶ The authors were careful to implement the strict code of classification recommended by the International Association of Chiefs of Police (IACP). According to IACP guidelines, a case should not be filed as false unless investigation has revealed that no sexual assault has occurred. It is not enough if no evidence of an assault was discovered; it had to be demonstrated with careful investigation that no crime in fact occurred. This ensures that shortcuts by police to discount the credibility of victims, bolstered by nothing but prior beliefs, are prevented from misclassifying reports as false.

are false—and this was well after changes had been made in police procedures in recording and handling the complaints of rape victims. Jordan (2004) examined the 1997 police files for sexual assault from three large cities in New Zealand. She found from the written comments of the police that their dominant mindset was one of suspicion towards complainants, triggered by various cues. In a survey of 891 police officers in southeastern United States, Page (2008) found that personnel in the criminal justice system as a whole believed that only 50% of the rape reports were “true”, with the correct assailant identified. Schwartz (2010) interviewed first responder police officers for rape victims in the U.S. and one of the questions asked was what percentage of the complainants report rape that never happened. The 428 officers who responded to the question claimed, on average, that about one-third of the putative rapes never happened (p. 44). Credibility discounting, then, is a pervasive phenomenon; beliefs regarding the frequency of false reporting are *an order of magnitude* higher than what is factual.

An additional disturbing feature of sexual assault cases is the steep rate of attrition of cases as they proceed through the CJS. Stern (2010, pp. 44-45) reports a typical case from a Home Office study conducted in 2003-4 for eight police forces in England and Wales. On average, of 100 reported cases, 15 were not recorded as crimes, 20 were dropped by the victim who decided not to pursue, 23 were dropped because of lack of sufficient evidence, 14 were dropped for other reasons, and in the remaining 26 the perpetrator was charged, and 19 of these were prosecuted (during which several victims dropped out and did not cooperate), with the result that 12 were found guilty of rape or another offence. This 12% conviction for rape or a related offence compares with 14% for Canada and the U.S., 11.5% for Australia [Daly and Bouhours (2010)].⁷ Only about half the convictions, however, were for the original charge of rape. Furthermore, since only 14% of rape victims were found to have reported the crime on average across the five countries in the latter study, the conviction rate as a proportion of the crimes committed would be expected to be much smaller than the numbers provided above. In accordance, of the women who were raped, only around 1.8% find their assailant held accountable.

In response to feminist criticisms since the early 1970s of rape laws and the attitudes of the police, governments in developed countries have responded by instituting reforms in the laws and have had the police lay down guidelines for appropriate handling of rape cases. For example, the law no longer requires the victim to demonstrate that she resisted; nor can the sexual history of the victim be invoked by the defense (though some exceptions are made). The effects of these reforms, however, have been rather limited in terms of the number of cases processed and the outcomes, as seen in the study by Spohn and Horney (1992) of six urban jurisdictions in the U.S. for the 1970-1984. A later study by Bachman-Paternoster (1993) for the United States over the period from the 1970s to the 1990s at a national level also showed almost no impact except for a

⁷ Note that these conviction rates refer to convictions as a percentage of *reported* cases only (not of the actual incidence of rape, for which there is no precise data).

moderate increase of 10% over the period in the reporting of rapes. Programs intended to make the police more informed and sensitive in response to criticism have also had very limited success, as the studies by Temkin (1997) and Jordan (2001) cited above have found.

In sum, for women who have been sexually assaulted, police disbelief of their reports are grossly exaggerated relative to the facts. The attrition rates before sexual assault cases reach the CJS and while in the CJS, remain high⁸. A tiny fraction of the victims have the very serious harm done to them acknowledged by vindication, which implies that the requisite signals to men for engaging in sexual assault are not forthcoming. The question is *why*. In the next section, I sketch the simple framework to discuss the mechanisms that perpetuate this state of affairs, from the perspective of an economist.

III. Sexual Assault and the Criminal Justice System: Outline of a Simple Model

Consider the following conceptual framework, formalized in Eswaran (2018). The milieu in which sexually assaulted women seek redress comprises four sets of actors: those men who sexually assault women, victimized women, women who may feign assault, and the state. The conceptual time line is as follows. A sexual predator decides on whether to assault a woman.⁹ An assaulted woman then decides whether to report the event and identify the alleged assaulter, weighing the costs and benefits of doing so. I treat the state as comprising the police and the prosecutor. The police puts forward a case or not and provides the evidence if the former, and the prosecutor decides whether to press charges.¹⁰ If the woman reports a sexual assault the police, who entertain prior beliefs about the veracity of the reports, then gather evidence on the suspect. In doing so, they also anticipate the probability with which they think the prosecutors downstream will decide to press charges, the likelihood that the victim would drop the charges and withdraw from the process, and the resulting probability of a guilty verdict ultimately. Of course, in making their choices the predators, the putative victims, and the state will anticipate what is to come in the sequence of events, and so we need to solve for the equilibrium choices by working backwards.

In this model, I emphasize, the police's effort put into evidence collection is motivated by their initial (prior) beliefs about the veracity of the reports of rape. Evidence collection reveals more information about the guilty suspect and also reveals more exculpatory evidence regarding innocent suspects.

This framework immediately makes clear that the state's collection of evidence against the suspect is typically less than what it would have been had the prosecutor been solely representing

⁸ On some factors that impinge on the attrition trajectories through the CJS, see Hester and Lilley (2016).

⁹ I assume away serial rapists here for simplicity.

¹⁰ This is so in my model; in reality the procedure can deviate slightly from this.

the victim. Since the prosecutor works for the public interest—that is, would like to convict the guilty and also exonerate the innocent—legitimate concerns about the suspect’s possible innocence temper police effort in evidence collection, especially when the victim’s report is not quite believed. This puts the victim at a disadvantage relative to the suspect, who is solely represented by defense counsel. It is only when the victim’s claim is believed by the police to be true with 100% probability that the state’s incentives are perfectly aligned with the victim’s. When the police prior belief in the veracity of the report falls short of 100%, evidence collection falls short of what would have been optimal from the victim’s vantage point. The greater the cynicism of the police regarding the truthfulness of reports, the greater is the effect of the disparity between the legal representations of the suspect and the putative victim. This is the reason why credibility discounting matters. The important implications of this model are summarized below.

Proposition: A decrease in the proportion of the reported assaults that are believed by the police to be truthful, (i) reduces the police’s investigational effort in collecting evidence, (ii) decreases the frequency with which sexual assaults are reported, and (iii) increases the frequency of false reports, and (iv) increases the frequency of sexual assaults.

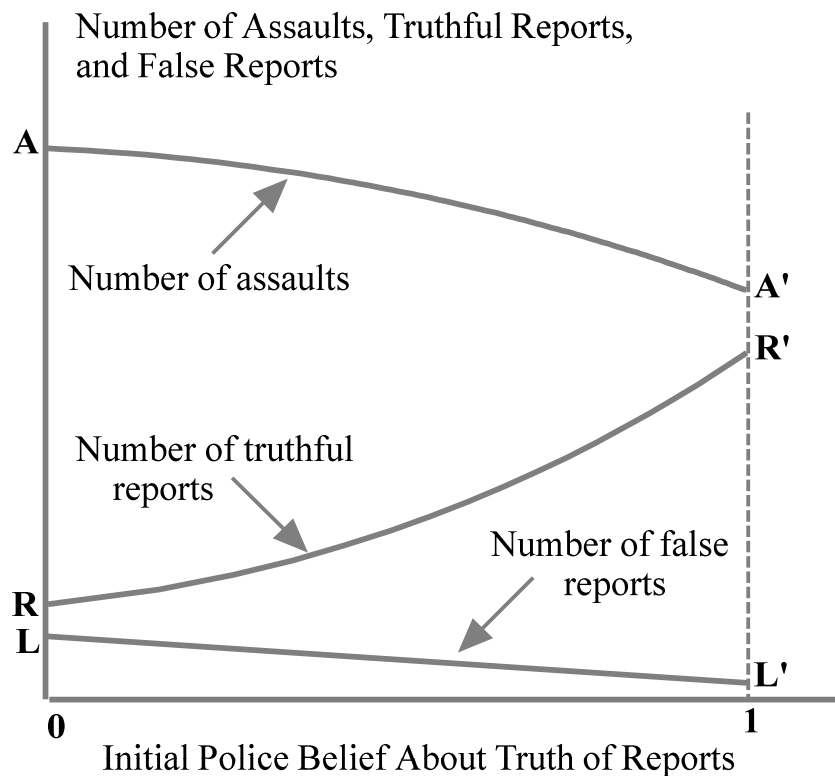


Figure 1: How the number of assaults, truthful and false reports change when police beliefs change

Consistent with the simple framework sketched out above of the more specific model in Eswaran (2018), Figure 1 illustrates the implications results stated in the above proposition. The figure shows the manner in which the equilibrium outcome changes when police's initial beliefs change in favor of believing reports to be truthful. When the police force entertains the notion that a large proportion of the reports about rape lodged by women are false, it demotivates them and, since the acquisition of evidence is endogenous, the evidence that ought to be gathered is not. As police priors (initial beliefs of the police) improve in favor of reports being deemed truthful, the number of truthful reports increases along the schedule RR' because women find that it is more worthwhile to incur the cost of reporting when the police are more inclined to gather the evidence to substantiate their claims. At the same time, the number of false reports decreases along LL' because more evidence is likely to also reveal these reports as false and so it is not worth incurring the cost of falsely reporting. The net result is that the number of sexual assaults decreases because predators are more likely to be apprehended and convicted, as shown by the declining schedule AA' .

When the police are very skeptical about the truthfulness of reports, sexual predators engage in rape with greater frequency because they are less likely to be apprehended and convicted.¹¹ The lower likelihood of conviction further induces assaulted women to report the crime less frequently.¹² So, as sexual assault becomes more pervasive with greater police cynicism, its true extent becomes more hidden. Finally, as noted, since the reduction in evidence collection lowers the detection of false accusations of assaults, the proportion of false reports of assaults increases. Ironically, it is police cynicism regarding the credibility of women who report rapes that brings about an increase in the proportion of reports that are false. Furthermore, by ensuring that more perpetrators are acquitted, it can render police beliefs a self-fulfilling prophesy. Thus, in the realm of sexual offenses the initial beliefs of the police are crucial to determining outcomes, and the consequences of credibility discounting are insidious.

The prediction that exaggerated police beliefs can increase false reporting may seem puzzling, especially since the evidence is that false reporting is already quite low in reality. This claim is a theoretical prediction about changes, not about actual levels, of false reporting when police beliefs change. Unfortunately, given the poor state of empirics in this area, I cannot offer evidence for this prediction. Nevertheless, the theoretical prediction serves a very important purpose. It points out that if the police believe a large proportion of the reports on rape are false, then those very beliefs can contribute in a self-fulfilling manner to the actual extent of false

¹¹ It is assumed criminals are influenced by the deterrence of potential punishment. Chalfin and McCrary (2017) survey the topic, concluding that the evidence that a higher probability of punishment decreases crime is quite strong, while the evidence that increasing the severity of penalty acts as a deterrent is weaker.

¹² For example, Benoit et al (2016) show using Canadian data from 2012-13 that sex workers have even less confidence in the police than do women in the general public, and their review cites evidence that sex workers are less likely to report the crimes committed against them.

reporting. In any case, less police cynicism will yield better outcomes for women and also for innocent men because more evidence collection will tend to exonerate the latter.

It should be noted that, in the equilibrium, the expectations of all the actors are not met. The women and the perpetrators of sexual assault operate under correct expectations. But the police force does not—the actual proportion of truthful reports is not what they have assumed it to be—it is much larger in reality. This nevertheless seems to be an equilibrium outcome because decade after decade and in country after country, police priors are *not* being updated to be consistent with fact.¹³ Inconsistent police priors are one of the premises on which my analysis rests, and the model brings out its stark implications.

The question then arises: Why do false beliefs on the part of the police persist? This is a difficult question to answer because it would require inputs from psychology and sociology in addition to those from economics. “Rape myths” undoubtedly have much to do with this.¹⁴ The stickiness of preconceptions is also very likely due to the confirmation bias that the literature in psychology has documented: we tend to interpret new information in a manner consistent with our previously held beliefs.¹⁵ Yet another reason may be purely economic—it may have to do with the career incentives the police forces are motivated by. If they are rewarded (by promotions, etc.) for the proportion of cases they solve, they may well have a conscious or unconscious motive for “unfounding” difficult cases under the pretext that they are falsely reported [see Avalos (2016), Yung (2014)].¹⁶ Whatever the reasons, adherence to rape myths seems to be pervasive; it exists in the legal system, too [Comack and Peters (2005)].

I also note that if victims are enabled to be more likely to prosecute and to endure the length of the trial process and not drop out, the police would be more motivated to gather evidence because their effort will be more productive. This would increase conviction rates and, as a

¹³ A section in the Appendix of Eswaran (2018) presents a “fixed point” argument to identify the police prior that would be consistent with the endogenous proportion of true reports in the ensuing equilibrium.

¹⁴ Rape myths are persistent, erroneous beliefs about rape victims and the nature of rape. The holding of rape myths has been seen to be correlated with attitudes of sexism and also racism [Saurez and Gadalla (2010). Peterson and Muehlenhard (2004)]. Unfortunately, even victimized women sometimes end up internalizing these myths as a way of salvaging their fragile sense of self after being sexually assaulted [Moor (2007)].

¹⁵ This tendency remains even in the presence of Bayesian updating (the updating of beliefs when new information becomes available), as was shown by Rabin and Schrag (1999). In essence, signals that require interpretation are interpreted more frequently than warranted to be in favor of the previously believed hypothesis. As a result, erroneous beliefs of the police (who have access to the relevant data on the issue)—and, even more so, those of the general public (who do not)—can persist in the face of new evidence to the contrary.

¹⁶ With regard to the incidence of false allegations of rape, Saunders (2012) has attempted to understand why there is a disparity between academic researchers and practitioners in the CJS. On investigating a small sample of the latter in Britain, she identified an important reason: academic researchers and practitioners in the CJS do not mean the same thing by the concept of “false allegation”. The former assume it means that no rape has occurred, whereas the latter do not mean that no rape occurred but, rather, that there are falsehoods in the account. These falsehoods or inaccuracies are important because they can make successful prosecution and conviction difficult or even impossible, but the suggestion is not necessarily that no rape has occurred.

consequence, even more victims are likely to report their assaults. And, in turn, this would decrease the frequency of sexual assaults. Thus reductions in exogenous attrition would, in a virtuous circle, endogenously raise evidence-gathering effort, increase conviction rates, and lower the frequency of rapes.

IV. Policy Implications: What We Can Do

The serious short- and long-term health consequences for women of sexual assault are very well documented. The victims suffer from a host of problems [Dworkin et al (2017), World Report on Violence and Health (2002), Hawks et al (2019)]. There are many tangible and intangible costs of rape to the victim and to society. The tangible costs are the direct ones like cost of medical treatment, loss of productivity etc. The intangible costs are the psychological costs of rape.¹⁷ These are harder to measure and so have to be elicited indirectly by, for example, statistically parsing out the share of psychological costs from jury awards. McCollister et al (2010) estimate the total tangible cost to society per rape in the U.S. at \$41,000 and intangible costs at around \$199,000, giving a total cost per rape of \$240,000 in 2008 dollars. The authors point out that these costs are much larger than the cost society would incur in preventing rapes.

A measure of the cost of preventing rape can be obtained from the results of a randomized control evaluation of an innovative sexual assault resistance program for university students at three Canadian universities by Senn et al (2015). The program showed a significant reduction in the incidence of rape among the students who undertook the resistance program: their one-year risk of completed rape was 5.2% as opposed to 9.8% in the control group that did not take the program. The study found that for every 22 students who underwent the program, on average, one rape was prevented. The cost for administering the program to 22 students was approximately \$5,155.¹⁸ So, for a price of \$5,155 one rape is prevented on average at a university. This is a pittance compared to the cost to the victim and society of a rape that has occurred.

Boba and Lilley (2009) examined the effect on reduction in rape (and aggravated assault) of the funding through the U.S. Department of Justice for the *Violence Against Women Act* of 1994. They employed panel data over the years 1996-2002. After controlling for jurisdictional fixed

¹⁷ On measures that can reduce these costs to victims, see Regehr et al (2013).

¹⁸ This has been computed using the data provided for the program at <http://www.blueprintsprograms.com/program-costs/eaaa-enhanced-assess-acknowledge-act-sexual-assault-resistance-education>. The amount has been converted to USD using the exchange rate of 1.34 for December 2016, when the numbers were last updated. I gratefully acknowledge the help of Dr. Karen Hobden and Dr. Charlene Senn, two coauthors of the study, in accessing the cost figures.

effects, the overall time trend for all crimes, and other funding that might have affected the outcome, they find that the elasticity of rapes with respect to VAWA funding through the DOJ is -0.066 and is statistically significant. The authors are careful not to infer a causal relationship between funding and rape reduction because the allocation of VAWA funding was not randomized. Nevertheless, assuming the correlation is causal, we can obtain a rough-and-ready estimate of the cost of rape reduction. Black et al (2011, Table 2.1, p. 18) shows that, if we include only completed rapes and drug/alcohol facilitated penetration, there were around 1.4 million rapes of women in the U.S. in 2010, and 0.066% of this would be 924 rapes. Laney (2010, p. 4) gives \$210 million as the DOJ's share of the VAWA funding for 2010, and 1% of this is \$2.1 million. So increasing funding by \$2.1 million reduces 924 rapes of women. Therefore, the cost of rape reduction of women through VAWA funding is around \$2,270 per rape. Given that the cost to society of a rape is around \$240,000, VAWA funding gives a return to society that is more than hundred-fold.

In the light of these numbers, it is unconscionable that public policy initiatives to reduce rape have been so limited. There are further policy avenues to lower incidence that follow from this paper's analysis. I discuss a few of these in this section. I add a fourth, also important, by stepping out of my analysis and drawing on the literature.

Eliminating Credibility Discounting

We have seen that the opinions of decision makers in the CJS (certainly the police, and probably also prosecutors, judges, and juries) about false reports are far from the facts of the matter. We have seen the reasons for this and their pernicious consequences in the preceding sections. As noted earlier, the effects of attempted reforms are only marginally noticeable and leave much to be desired.

The persistence of false beliefs suggests that convergence to the correct figure of accurate reporting depends crucially on the initial belief about the probability of truthful reporting. Were Bayesian updating (that is, the updating of previous beliefs in the light of new evidence) to function in an objective manner, false initial beliefs would have been a problem only in the short-run but not in the long-run. Confirmation bias and possibly inappropriate career incentives for the police, however, can thwart the functioning of this corrective mechanism and so rape myths can persist over the long run, despite being starkly contradicted by the facts on the ground. This brings home the importance of initial beliefs on even the long-run in the case of sexual assault.

A campaign has been launched in the United States called *Start by Believing* [Lonsway and Archambault (2014)]. This program urges people who are approached by victims of sexual assaults (be they family members, friends, or the police), to start by believing that the claim is

true.¹⁹ This would promote reporting of sexual assaults and prevent attrition in the CJS. In terms of my model, the program essentially seeks to change the initial beliefs to virtual certainty. We have seen that as police priors improve, evidence collection increases. Thus one would predict that the outcomes would be much more in line with facts if the initial prior is high, and will ensure that more women get justice while sexual predators will be discouraged. The *Start by Believing* policy aims at a “shift from a focus on the discredibility of complainants to enhanced evidence gathering and case-building” [Kelly et al (2005, p. 89)]. The jury is still out on whether the policy is meeting with success in practice, but the initiative is promising. One policy that might help is to have rape investigation teams that are of mixed-gender composition, since women are more inclined to believe victims than are men [Suarez and Gadalla (2010)].

Tuerkheimer (2017) has suggested a proposal that also has promise. She argues that credibility discounting should be deemed an actionable form of discrimination. The idea is that, by being disbelieved, sexually assaulted women are denied justice and this contravenes the Equal Treatment Clause of the Fourteenth Amendment to the U.S. Constitution. This is an angle that may have scope because even stereotyping is now seen as violating the law, depending on the context [Herz (2014)]. In stereotyping, some average feature of a well-identified group is attributed to every individual in that group without allowing for heterogeneity. With credibility discounting, one would reckon that the case is even stronger than for stereotyping because the ‘characteristic’ in question—the alleged tendency of women reporting rape to lie—is not even true in an average sense, as the evidence clearly reveals. The analysis I presented here suggests that, if the police were mandated by law to investigate all reports, the evidence gathered would have a cascading effect: no cases would be dropped by the police, more evidence would be gathered, a higher proportion of cases would be prosecuted, a higher proportion of trials would result in convictions, and the frequency of reports by genuine victims would rise.

There seems to be scope for an approach similar to Tuerkheimer’s in Canada, emphasizing equal protection under the Canadian *Charter of Rights and Freedoms*. By wrongfully dismissing a claim of sexual assault as ‘unfounded’ even without any investigation, the police are engaging in falsely stereotyping women and so deny them equal protection. Sheehy’s (2005) analysis of the landmark *Jane Doe v. Metropolitan Toronto Police* case spells out the promise of this approach.²⁰ Crew (2012), also analyzing this approach for Canada, examines its advantages over that of claiming police negligence, which has higher informational requirement.

An alternative way to address the problem of credibility discounting may be to adopt what is called the Philadelphia model that has been adopted in many American cities. In response to the rampant credibility discounting that was practiced by the Philadelphia Police Department and

¹⁹ On the importance of being believed to the subsequent healing process of sexual assault victims, see Campbell et al (2001).

²⁰ This paper also details the ways in which police beliefs impinge on evidence collection and their performance.

subsequently exposed by the media, the police undertook to reform its procedures by inviting the scrutiny of advocates of sexual assault victims. The essential problem here is about confidentiality of information but the model appears to have found adequate ways around that in America. If adopted in Canada, the Philadelphia model would allow the handling of sexual assault cases more transparently, hold the police more accountable, and above all go a long way towards ensuring that victims' claims are not cavalierly dismissed. In an analysis of what this model's adoption in the Ontario province of Canada would entail, Conroy and Scassa ((2016) conclude that the problem of privacy of information is not likely an insurmountable difficulty.

I should briefly mention here that the police force often investigates the victim in addition to investigating the suspect. This is warranted by the need for information in the adversarial CJS, should the case go to trial, in which evidence regarding the victim is brought into intense scrutiny by the defense to discredit her as a witness when she claims did not consent. I show in my formal analysis in Eswaran (2018) that low police priors of truthful reporting would tilt the mix of their investigative effort towards the victims at the expense of investigation of the suspects. This would further exacerbate the consequences of the fact that the state is not the victim's advocate and inadvertently benefit the suspect who is already privately represented by the defense. As a result, the case would be stacked even more firmly against the victims, thereby lowering equilibrium reporting rates and allowing men to sexually assault without fear of the consequences. This has an important bearing on the question of whether women who are deemed to have falsely reported sexual assault should be punished in order to protect innocent men.²¹ Although well-intentioned, this may be a misguided step. Since there is the possibility that even truthful reports may be erroneously deemed false, genuine victims may reduce reporting rates and the frequency of sexual assault can actually increase in equilibrium as a result.

Reducing Attrition in the Criminal Justice System

As we have seen, rape cases undergo severe attrition as they proceed through the CJS [Gregory and Lees (1996), Kelly et al (2005), Spohn and Tellis (2012)]. This has usually led scholars and policy makers to focus on the actions of the police and the prosecutors. This is correct, because their actions do seriously contribute to the problem. However, part of the attrition may be exogenous to these actors in the CJS. Women can and do drop out because of personal reasons, dealing with the trauma, attending to their families, etc. If this happens routinely, the investments of the police in the cases are wasted and so they would be motivated to curtail their effort. This lowers conviction rates and encourages sexual assaults in the future on other women and could also result in endogenous attrition from the CJS. Thus, there is a social cost associated with a single individual dropping out of the process, one that she does not internalize.

²¹ See Avalos (2016) for a critique of the policy of imposing such a punishment.

A victim who bears witness in the state's case against a perpetrator is conferring a positive externality on society. If the perpetrator is convicted and jailed, her testimony would have prevented other women from being assaulted because the punishment is a deterrent to other perpetrators of this crime. While the state bears much of the cost for the criminal trial, the victim also bears a substantial part of it. When a victim withdraws her complaint or decides not to cooperate with the prosecution for reasons exogenous to the CJS, the positive externality her testimony would have conferred on society is not forthcoming. Sexual assault rates marginally increase as a result. Successful prosecution requires the victim's participation and the state's evidence, and the difficulty is that there is no contract feasible to ensure adequate performance of both parties. There is, potentially, two-sided moral hazard here and the outcome in such scenarios is well-known to be typically inefficient. This is a separate issue from credibility discounting, and needs to be addressed because exogenous attrition dilutes the police's incentives to collect evidence.

Among the reasons victimized women cite for not proceeding with the trial, one is that they lack the needed support. Quite apart from being treated with respect and sensitivity by the CJS, they need information about legal procedures and knowledge regarding what they should expect in the trial. Furthermore, they need help with the trauma of being assaulted and seeing the integrity of their bodies violated. Attending to these needs falls outside the purview of the CJS and so they require complementary efforts from the states' social and health services, rape victim advocates, along with help from local support groups. What are called Sexual Assaults Response Teams (SARTs) in North America and Sexual Assault Referral Centers (SARCs) in the U.K. are aimed at performing precisely this function. But they are relatively few and far between; they have a long way to go before most victims have access to one [Stern (2010, Ch. 2)].

There is another promising avenue through which attrition of rapes cases through the CJS could be reduced. Trials under common law are viewed as a battle between two opposing sides, where the goal is to win and not necessarily to discover the truth about the matter being contested. The judge in this adversarial proceeding is deemed to be an impartial, but passive, referee who ensures that the rules are respected and who declares the winner. To achieve its goal, as we have seen, the defense in rape trials tries its best to discredit the putative victim—with the result that sexual assault victims often feel that they have been victimized again (by what is sometimes called the 'second rape'), this time by the legal process. In the inquisitorial legal system that is prevalent in countries based on civil law, the court is in charge of the legal proceedings. The judge plays an active role in deciding what evidence is to be sought, who are the witnesses to be interrogated, etc. The proceedings are much more oriented towards discovering the truth in a non-partisan way. It is very likely that, in rape trials, the inquisitorial system of civil law has advantages over the adversarial one of common law.

Stern (2010, p. 98) hints at the possibility that the criminal justice system of other countries like France, which is based on civil law, may have some lessons for those based on common law. Here is a comparison of police-recorded rape rates (per 100, 000 of population) in France and some other OECD countries with common law: Australia (2003) 91.6, Canada (2006) 68.2, England & Wales (2006) 25.6, New Zealand (2006) 32.2, United States (2006) 30.2, France (2003) 17.3.²² France has the lowest figure of these. However, this has to be interpreted with caution because reporting rates show considerable variation across countries.

Additional suggestive evidence, somewhat more persuasive, is afforded by the detailed study of rape in 11 European countries by Lovett and Kelly (2009). They find that conviction rates (as a percentage of reported cases) was the higher in France (25%) than in many countries in Western Europe, like Sweden (10%), England & Wales (6%), Ireland (7%), Scotland (3%) [Ibid. Table 4.2]. The laws in the latter countries may only be loosely based on common law but, as the authors point out, they do have an adversarial legal system. Furthermore, while all the five countries showed a rise in the national reporting rate for rape over the four decades 1977-2017, France is the only country that also showed a *rise* in the conviction rate. The stark contrast shown by a country with civil law is worth noting.

The report by Bacik et al (1998) is extremely suggestive in this regard. In the French case, the victim can have a lawyer represent her (though with some restrictions). The law delivers two verdicts, one on the sentencing and the other on the compensation the victim is to receive either from the accused or the state. This lawyer, whose main role is in determining the compensation the victim is due but not in the sentencing, is a source of support to the victim throughout the trial. We would expect this feature of the French system to lower attrition. This indeed seems to be the case. From Bacik et al (1998, p. 221) we see that in 1996 there were 7,191 cases of rape reported, of which 5,856 were prosecuted, and in 2,740 cases convictions were obtained. So 81% of the reported cases proceeded to trial, and 38% of the reports resulted in convictions. This figure is more than 3 times that in the U.K., Canada, and the U.S., all of which have legal systems based on common law.²³

Allowing the victim to have an advocate even in a limited capacity, then, seems to dilute the effects of credibility discounting and also temper the attrition in the CJS. This may be a policy that Canada and other common-law countries should seriously consider. Several provinces in Canada, for example, Nova Scotia, Quebec, and Ontario have gone some distance in this direction. They provide free legal assistance (limited in some cases) to victims of sexual assault.

²² *International Statistics for Crime and Justice*, (eds.) S. Herrendorf et al, European Institute for Crime Prevention and Control, UNODC, Helsinki, 2010, Annex B to Chapter 2, Table 3, pp. 39-41.

²³ We may note that this difference between the outcomes in civil law and common law countries should be expected only for sexual assault cases and not for all criminal cases. The reason is that credibility discounting plagues mostly victims of sexual assault.

Raising the Consciousness of Men

Addressing the problem of sexual violence against women broadly requires society to perform two functions: reduce the incidence of such violence and attend to the needs of the victims. In reducing the incidence, while deterrence through the enforcement of law is pursued more vigorously, it also requires efforts to substantially increase in the reporting of sexual assaults. As mentioned, around 90% or more of these assaults go unreported. Much has been accomplished in publicizing the magnitude of sexual assaults women have been exposed to in the recent #MeToo movement that began in 2016 (and which was followed by the Time's Up movement a few months later), though the focus is not exclusively on rape but on sexual assault and harassment in general. The fight against sexual harassment gets its legal strength from the fact that it is now interpreted by law as a form of discrimination by sex, which is outlawed in most liberal democracies. Despite its illegality, it has persisted because of credibility discounting, because men in power have tended to suppress it, and because women were apprehensive of the blowback without any compensating benefit. The #MeToo movement has raised the voices of so many assaulted women in unison through social media that credibility discounting is much less feasible; suppression of, and retribution for, the voicing of grievances is also less possible.²⁴

In Canada, the reporting of sexual assaults during the period 2016-2018 went up quite substantially: the average number of victims per quarter was seen to increase up by 25% after #MeToo compared to before.²⁵ A similar increase has been informally reported in other countries, too. Furthermore, in Canada, the Federal government may have been influenced somewhat by this movement; the Federal budgets of 2017 and 2018 have dedicated more resources towards helping sexually assaulted women. In 2017, Bill C-65 was tabled in parliament introducing an amendment to the Labor Code to prevent sexual harassment in federally regulated organizations. The amendment will go into effect soon. Many of the changes in Canada have also responded to Robyn Doolittle's exposé "Unfounded" that I alluded to earlier. In response to this, dozens of police departments across the country have started instituting training programs and reforming their procedures with regard to sexual assault. As a result, some have shown a dramatic decline in the rate at which rape complaints are unfounded.²⁶

The #MeToo phenomenon is obviously too recent for extensive empirical studies to have been conducted to determine its consequences. However, a few studies have examined its short-run

²⁴ For an insightful take on the legal underpinnings of the #MeToo movement written by one of the pioneering feminist scholars in the legal battle against sexual harassment, see Catherine MacKinnon's article "Where #MeToo Came From, and Where It's Going," *The Atlantic*, March 2019.

²⁵ See Rotenberg and Cotter (2018), which also reveals, however, that fewer people were identified as potential assailants after #MeToo and that the proportion of people charged did not change.

²⁶ For more on this, see Robyn Doolittle's article in the *Globe and Mail* on August 2, 2018: <https://www.theglobeandmail.com/canada/article-unfounded-rates-start-to-fall-in-cities-across-canada/> Doolittle has followed up her work with an informative book in 2019 entitled *Had It Coming*.

effects. Klepinger et al (2019) conducted a repeated cross-sectional survey in September 2016 and September 2018 of around 500 American women with ages between 25-45 years working mostly as mid-level employees. Around 87% of the women in the sample had experienced at least one form of sexual harassment at work. The comparison between 2016 and 2018 revealed significantly lower levels of sexual coercion and of unwanted sexual attention during the period. But in contrast, there was a significant increase in the gender harassment the participants faced.²⁷ This last effect may be construed as a backlash against the #MeToo movement from the threat it poses to men. Some more evidence was found by Atwater et al (2018) in their survey in the U.S. of around 300 women and half as many men, drawn from a variety of industries. Among the findings of the study, men were reported to have mentioned that they would be reluctant to hire women in positions that required close man-woman interactions and that they would not like to undertake (job-related) travel with female coworkers. These attitudes, if implemented, would of course be detrimental to women's careers.

It is not necessary that we seek to reduce the incidence of rape only by making men aware of its dire consequences to them, taking the proclivity in some men to rape as given. Nor is it appropriate to place on women the entire burden of protecting themselves. An alternative route, complementary to both these avenues, would be to change the culture in which rape is seen by men as acceptable. The perception of men about rape is culture-dependent [Kahan (2010)].²⁸ There is considerable evidence that gender attitudes in general are deeply embedded in historical roots, with beliefs becoming the durable vehicles through which cultural values are transmitted long after they have outlived the context in which they emerged.²⁹ Culture, not natural selection, can be the dominant mechanism through which genes are transferred to posterity because culture can determine whether or not men get potential mates and have access to women. Anthropologists have identified distinct differences in the cultures that engender rape-prone societies and rape-free ones.³⁰ Patriarchal cultural values even in liberal democracies undermine the status of women and they strongly correlate with the incidence of rape.³¹

It is possible that in our societies, from high school on men can be socialized through education, have their patriarchal values questioned, and their consciousness raised about the importance of

²⁷ "Gender harassment" is defined to be a contemptuous and insulting attitude towards a person based on their gender.

²⁸ Disturbingly, based on an experimental study Kahan (2010) finds that people who are hierarchical—both men and women—are culturally conditioned to interpret a women's 'No' as not necessarily 'No' and would tend to acquit the accused irrespective of how the law defines rape.

²⁹ See Giuliano (2018) for a review of this work

³⁰ See, for example, the insightful research of Sanday (2003).

³¹ In a very recent study done for the U.S. between 2011 and 2017, in a national cross-sectional sample of 13,310 women between the ages of 18 and 44 years, 6.5% of the women were found to have had their first initiation into sexual intercourse through coercion by men who had a mean age 6 years higher [Hawks et al (2019)]. We may reasonably characterize the culture in the U.S. and other such countries as 'rape-prone'.

consent and the seriousness of sexual assault.³² It is possible that, when our culture is universally permeated by the awareness that rape is an offense against humanity, most men will be socialized to see sexual harassment as abhorrent. This would induce them to abandon their apathy towards an offender's behavior and, if necessary, intervene as bystanders if they are witnessing harassment.³³ There are a few such programs, evaluated by rigorous randomized control treatments, which show promise but they certainly do not get anywhere near the exposure they should.³⁴

Policies that seek to directly raise the consciousness of men are likely to have a high social payoff for they would prevent or attenuate the problem. This would be an improvement over exclusive reliance on deterrence and on attending to the damage once it is done, which in any case cannot be completely undone.

V. A Concluding Thought

Discounting the word of women reporting rape has had a long and infamous history. In seventeenth century England, Justice Sir Matthew Hale made the frequently quoted observation that rape "is an accusation easily to be made and hard to be proved, harder to be defended by the party accused, tho never so innocent".³⁵ This opinion has cast a long shadow on the legal treatment of rape charges in common law. Today, such an opinion strikes one as being firmly entrenched in patriarchal rape myths. For it ignores the enormous psychological costs victims have to internalize and the formidable social barriers that they have to overcome to bring such charges. Nevertheless, it must be acknowledged that false charges as portrayed by Harper Lee in her immortal *To Kill a Mockingbird* are not merely a matter of fiction. Yager (2015) has carefully documented many such cases in contemporary United States, for example. That said, we must also acknowledge that the preponderance of evidence from various careful studies across the world have put the percentage of false rape charges at around 5 or less.³⁶ This brings me to my final observation.

³² Rape is not the only action that is a crime when there is lack of consent; theft, battery, trespassing, etc. also become crimes when there is no consent [Estrich (1987, Ch. 3)]. What singles out rape, however, is that usually sex is consensual and is presumably to the mutual benefit of both parties; in rape, it is decidedly not. As a quote from Stern (2010, p. 7) puts it, "Rape is unique as it is an inherently lawful activity made illegal because of lack of consent."

³³ See Banyard et al (2007) for a review of studies on bystander intervention

³⁴ In particular, see the promising route reported in Miller et al (2012).

³⁵ Quoted in e.g. Rumney (2006).

³⁶ It would be fair to mention, as a point of caution, that the 5% figure for false reports is considered by some researchers as understated. For example, in an unpublished manuscript Yager (2015) points out that in 5% of the cases it has been definitively shown that the reports are false. But that does not necessarily imply that the remaining

Given that around only 5% or less of reports on rape are false, the operative question should not be, “Why should we believe women who may be lying with 5% probability about being raped?” Rather, the relevant question should be, “Why do we believe men, when 95% or more of the men accused of rape may be lying about *not* having raped women?” This is a question that is never asked, and the patriarchal bias in even posing the right question is apparent. It is time that this bias is purged by raising the consciousness of men.

REFERENCES

- Atwater, L.E., A.M. Tringale, R.E. Sturm, S.N. Taylor, and P.W. Braddy (2018), “Looking Ahead: How What We Know About Sexual Harassment Now Informs Us of the Future,” *Organizational Dynamics*, <https://doi.org/10.1016/j.orgdyn.2018.08.008>
- Avalos, L. (2016), “Prosecuting Rape Victims While Rapists Run Free: The Consequences of Police Failure to Investigate Sex Crimes in Britain and the United States,” *Michigan Journal of Gender and Law*, 23:1, pp. 1-64.
- Bachman, R. and R. Paternoster (1993), “A Contemporary Look at the Effects of Rape Law Reform: How Far Have We Really Come?” *Journal of Criminal Law and Criminology*, 84:3, pp. 554-574.
- Ivana Bacik, I., C. Maunsell, and S. Gogan (1998), *The Legal Process and Victims of Rape*, Dublin Rape Crisis Centre, The School of Law, Trinity College, Dublin.
- Banyard, V.L. (2007), “Sexual Violence Prevention Through Bystander Education,” *Journal of Community Psychology*, 35:4, pp. 463-481.
- Benoit, C., M. Smith, M. Jansson, S. Magnus, N. Ouellet, C. Atchison, L. Casey, R. Phillips, B. Reimer, D. Reist, and F.M. Shaver (2016), “Lack of Confidence in Police Creates a ‘Blue Ceiling’ for Sex Workers’ Safety,” *Canadian Public Policy*, 42:4, pp. 456-468.
- Black, M.C., K.C. Basile, M.J. Breiding, S.G. Smith, M.L. Walters, M.T. Merrick, J. Chen, and M.R. Stevens (2011), *The National Intimate Partner and Sexual Violence Survey (NISVS): 2010 Summary Report*, Atlanta, GA: National Center for Injury Prevention and Control, Centers for Disease Control and Prevention.
- Boba, R. and D. Lilley (2009), “Violence Against Women Act (VAWA) Funding: A Nationwide Assessment of Effects on Rape and Assault,” *Violence Against Women*, 15:2, pp. 168-185.

95% of the claims are true, though this is the way it is usually interpreted. There is a grey area where the evidence is inconclusive; so there may be more than 5% false reports, but analysts just cannot say one way or another.

- Campbell, R., S.M. Wasco, C.E. Ahrens, T. Sefl, and H. E. Barnes (2001), "Preventing the 'Second Rape': Rape Survivors' Experiences with Community Service Providers," *Violence and Victims*, 16:3, pp. 287-302.
- Chalfin, A. and J. McCrary (2017), "Criminal Deterrence: A Review of the Literature," *Journal of Economic Literature*, 55:1, pp. 5-48.
- Clark, L. and D. Lewis (1977), *Rape: The Price of Coercive Sexuality*, Women's Press, Toronto, Ontario, Canada.
- Comack, E. and T. Peter (2005), "How the Criminal Justice System Responds to Sexual Assault Survivors: The Slippage between 'Responsibilization' and 'Blaming the Victim,'" *Canadian Journal of Women and the Law*, 17:2, pp. 283-309.
- Conroy, A. and T. Scassa (2016), "Balancing Transparency and Accountability with Privacy in Improving the Police Handling of Sexual Assaults," *Canadian Journal of Women and the Law*, 28, pp. 342-373.
- Conroy, S. and A. Cotter (2017), "Self-Reported Sexual Assault in Canada, 2014." *Juristat*, Statistics Canada, Catalogue No. 85-002-X.
- Crew, A.B. (2012), "Striking Back: The Viability of a Civil Action Against the Police for the "Wrongful Unfounding" of Reported Rapes," in Elizabeth A. Sheehy (dir.), *Sexual Assault in Canada*, University of Ottawa Press, 2012, Chapter 10.
- Daly, K. and B. Bouhours (2010), "Rape and Attrition in the Legal Process: A Comparative Analysis of Five Countries," *Crime and Justice*, 39:1, pp. 565-650.
- Doolittle, R. (2019), *Had It Coming: What's Fair in the Age of #MeToo?*, Alan Lane, Canada.
- Dworkin, E.R., S.V. Menon, J. Bystrynski, and N.E. Allen (2017), "Sexual Assault Victimization and Psychopathology: A Review and Meta-Analysis," *Clinical Psychology Review*, 56, pp. 65–81.
- Estrich, S. (1987), *Real Rape*, Harvard University Press, Cambridge, Mass.
- Eswaran, M. (2018), "State Complicity in the Sexual Assault of Women: The Fate of Cassandra?" UBC Working Paper, October.
- Feldman-Summers, S. and G.C. Palmer (1980), "Rape as Viewed by Judges, Prosecutors, and Police Officers," *Criminal Justice and Behavior*, 7:1, pp. 19-40.

- Ferguson, C.E. and J.M. Malouff (2016), "Assessing Police Classifications of Sexual Assault Reports: A Meta-Analysis of False Reporting Rates," *Archives of Sexual Behavior*, 45, pp. 1185-1193.
- Giuliano, P. (2018), "Gender: A Historical Perspective, in *The Oxford Handbook of Women and the Economy*, (eds.) Averett, S.L., L.M. Argys, & S.D. Hoffman (Eds.), Oxford University Press, New York, NY, pp. 645-672.
- Gregory, J. and S. Lees (1996), "Attrition in Rape and Sexual Assault Cases," *British Journal of Criminology*, 36:1, pp. 1-17.
- Hawks, L., S. Woolhandler, D. U. Himmelstein, D.H. Bor, A. Gaffney, and D. McCormick (2019), "Association Between Forced Sexual Initiation and Health Outcomes Among US Women," *JAMA Internal Medicine*, published online September 16 2019, doi:10.1001/jamainternmed.2019.3500
- Heenan, M. and S. Murray (2006), *Study of Reported Rapes in Victoria 2000-2003: Summary Research Report*, Office of Women's Policy, Melbourne, Victoria, Australia.
- Herz, Z.R. (2014), "Price's Progress: Sex Stereotyping and Its Potential for Antidiscrimination Law," *Yale Law Journal*, 124, pp. 396-446.
- Hester, M. and S.-J. Lilley (2016), "Rape Investigation and Attrition in Acquaintance, Domestic Violence and Historical Rape Cases," *Journal of Investigative Psychology and Offender Profiling*, pp. 1-14.
- Hubbard, W.H.J. (1999), "Civil Settlement During Rape Prosecutions," 66 *University of Chicago Law Review*, pp. 1231-1260.
- Johnson, H. (2012), "Limits of a Criminal Justice Response: Trends in Police and Court Processing of Sexual Assault," Ch. 24 in *Sexual Assault in Canada: Law, Legal Practice and Women's Activism*, (ed.) E.A. Sheehy, University of Ottawa Press, Ottawa.
- Jordan, J. (2001), "Worlds Apart? Women, Rape and the Police Reporting Process," *British Journal of Criminology*, 41:4, pp. 679-706.
- Jordan, J. (2004), "Beyond Belief? Police, Rape and Women's Credibility," *Criminal Justice*, 4:1, pp. 29--59.
- Kahan, D.M. (2010), "Culture, Cognition, and Consent: Who Perceives What, and Why, in Acquaintance-Rape Cases," *University of Pennsylvania Law Review*, 158, pp. 729-813.

- Kelly, L., J. Lovett, and L. Regan (2005), "A Gap or a Chasm? Attrition in Reported Rape Cases," Home Office Research Study 253, London, U.K.
- Keplinger, K., S.K. Johnson, J.F. Kirk, and L.Y. Barnes (2019), "Women at Work: Changes in Sexual Harassment between September 2016 and September 2018," *PLoS ONE* 14(7): e0218313. <https://doi.org/10.1371/journal.pone.0218313>
- Laney, G.P. (2010), "Violence Against Women Act: History and Federal Funding," Washington, DC, Congressional Research Service.
- Lisak, D. et al (2010), "False Allegations of Sexual Assault: An Analysis of Ten Years of Reported Cases," *Violence Against Women*, 16(12), pp. 1318--1334.
- Lonsway, K.A. and J. Archambault (2014), "Start by Believing: Changing Attitudes Toward Sexual Assault," Web-only article, *The Police Chief*, 81.
- Lovett, J. and L. Kelly (2009), "Different Systems, Similar Outcomes? Tracking Attrition in Reported Rape Cases Across Europe", Final Research Report, Child and Women Abuse Studies Unit, London Metropolitan University.
- McCollister, K.E., M.T. French, and H. Fang (2010), "The Cost of Crime to Society: New Crime-Specific Estimates for Policy and Program Evaluation," *Drug and Alcohol Dependence*, 108, pp. 98--109.
- Miller, E., D.J. Tancredi, H.L. McCauley, M.R. Decker, M.C.D. Virata, H.A. Anderson, N. Stetkevich, E.W. Brown, F. Moideen, and J.G. Silverman (2012), "'Coaching Boys into Men': A Cluster-Randomized Controlled Trial of a Dating Violence Prevention Program," *Journal of Adolescent Health*, 51, pp. 431--438.
- Ministry of Justice (2013), "An Overview of Sexual Offending in England and Wales," Statistical Bulletin, Office of National Statistics.
- Moor, A. (2007), "When Recounting the Traumatic Memories is Not Enough: Treating Persistent Self-Devaluation Associated with Rape and Victim-Blaming Rape Myths," *Women & Therapy*, 30:1/2, pp. 19-33.
- Page, A.D. (2008), "Gateway to Reform? Policy Implications of Police Officers' Attitudes Toward Rape," *American Journal of Criminal Justice*, 33, pp. 44-58.
- Peterson, Z.D. and C.L. Muehlenhard (2004), "Was It Rape? The Function of Women's Rape Myth Acceptance and Definitions of Sex in Labeling Their Own Experiences," *Sex Roles*, 51: 3/4, pp. 129-144.

- Rabin, M. and J.L. Schrag (1999), "First Impressions Matter: A Model of Confirmatory Bias," *Quarterly Journal of Economics*, 114, pp. 37-82.
- Regehr, C., R. Alaggia, J. Dennis, A. Pitts, and M. Saini (2013), "Interventions to Reduce Distress in Adult Victims of Sexual Violence and Rape: A Systematic Review," *Campbell Systematic Reviews* 2013:3, doi 10.4073/csr.2013.3.
- Rotenberg, C. (2017), "From Arrest to Conviction: Court Outcomes of Police Reported Sexual Assaults in Canada, 2009 to 2014," *Juristat*, Statistics Canada, Catalogue No. 85-002-X.
- Rotenberg, C. and A. Cotter (2018), "Police-Reported Sexual Assaults in Canada Before and After #MeToo, 2016 and 2017," *Juristat*, Statistics Canada, Catalogue No. 85-002-X.
- Rumney, P.N.S. (2006), "False Allegations of Rape," *Cambridge Law Journal*, 65:1, pp. 128-158.
- Sanday, P.R. (2003), "Rape-Free Versus Rape-Prone: How Culture Makes a Difference," in *Evolution, Gender, and Rape*, (ed) C.B. Travis, MIT Press, Cambridge, Mass., pp. 337-361.
- Saunders, C.L. (2012), "The Truth, the Half-Truth, and Nothing Like the Truth," *British Journal of Criminology*, 52, pp. 1152--1171.
- Schwartz, M.D. (2010), "Police Investigation of Rape—Roadblocks and Solutions," National Institute of Justice Visiting Fellowship, <https://www.ncjrs.gov/pdffiles1/nij/grants/232667.pdf>.
- Senn, C.Y., M. Eliasziw, P.C. Barata, W.E. Thurston, I.R. Newby-Clark, H.L. Radtke, and K.L. Hobden (2015), "Efficacy of a Sexual Assault Resistance Program for University Women," *New England Journal of Medicine*, 372, pp.2326-2335.
- Sheehy, E. (2005), "Causation, Common Sense, and the Common Law: Replacing Unexamined Assumptions with What We Know about Male Violence against Women or from Jane Doe to Bonnie Mooney," *Canadian Journal of Women and the Law*, 17: 1, pp. 87-116.
- Spohn, C. and J. Horney (1992), *Rape Law Reform: A Grassroots Revolution and its Impact*, Springer Science+ Business Media, New York.
- Spohn, C. and K. Tellis (2012), "The Criminal Justice System's Response to Sexual Violence," *Violence Against Women*, 18(2), pp. 169--192.
- Stern, V. (2010), *The Stern Review of Rape Reporting in England and Wales*, Government Equalities Office, Home Office, Great Britain.
- Suarez, E. and T.M. Gadalla (2010), "Stop Blaming the Victim: A Meta-Analysis on Rape Myths," *Journal of Interpersonal Violence*, 25, pp. 2010-2035.

Temkin, J. (1997), "Plus Ça Change: Reporting Rape in the 1990s," *British Journal of Criminology*, 37: 4, pp. 507-528.

Tjaden, P. and N. Thoennes (2006), "Extent, Nature, and Consequences of Rape Victimization: Findings From the National Violence Against Women Survey," U.S. Department of Justice.

Tuerkheimer, D. (2017), "Incredible Women: Sexual Violence and the Credibility Discount," *University of Pennsylvania Law Review*, 166:1, pp. 1-57.

World Report on Violence and Health (2002), World Health Organization, Geneva.

Yager, R.D. (2015), "What's Missing from the Sexual Assault Prevention Response," (unpublished) https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2697788

Yung, C. R. (2014), "How to Lie with Rape Statistics: America's Hidden Rape Crisis," *Iowa Law Review*, 99, pp. 1197-1256.