

Testimony in sexual and nonsexual assault trials: conviction is possible*

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July 20, 2020

Developments in the last decade have shed a new light on sexual crimes in the eye of the public, and raised the issue of police and justice response to the ongoing crisis. Prominent trials that resulted in acquittals (like the Gimeshi trial in Canada) or light sentences (as for Brock Turner in the USA) raised the issue that courts are a hostile environment for sexual assault victims that can offer them little remedies (Kassam, 2017). This low confidence in the justice system is highlighted by the low rate of police report (Perrault, 2015).

Much of the criticisms towards the justice system have focused on the testimony, particularly in court, which revictimizes the victim by forcing them to relive the events while having their credibility put in doubt (Campbell and Raja, 1999). On top of being cruel, it isn't clear that witnessing in court actually leads to its purported objective, i.e. securing a conviction. Indeed, some legal scholars and professionals believe that, because sexual assaults usually occur in absence of other witnesses, denying allegations would thus be a more viable strategy for defendants. For instance, as Baker (2015) puts it:

“A law that defines rape as nonconsensual sex may get the theory of rape right, but it ignores the overwhelming practical difficulty of proving non-consent to an act for which there are no witnesses, no extrinsic evidence, and often no particular reason to think that the act was not consensual.” (223)

On the one hand, sexual assaults usually occur in contexts and spaces that exclude third-party witnesses. As a result, “the victim’s story is all the prosecution has,” given that defendants can forego testimony. In any case, in absence of other evidence to confirm the victims’ version of facts, the defense would be at liberty to present alternative narratives. On the other hand, given that an

*We would like to acknowledge the contribution of the Laboratoire d’analyse cognitive de l’information and the Canadian Foundation for Innovation for the computer infrastructure that was used in this project. We would also like to express our thanks to Alice Livadaru for the original idea, and for allowing us to investigate it.

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expression of consent leaves little traces, lack of consent would be particularly difficult to establish. “The problem,” she concludes, “is that rape is a crime that by its nature has no witnesses, produces no demonstrable evidence, and inevitably brings with it a perfectly plausible theory of legality, i.e., consent.” (240) We may call this account the “Structural Impossibility” account, as the causal story it proposes suggests that structural aspects of the nature of the crime, its conceptualization by the law and the fundamental mechanisms by which trials accomplish their function conspire to make sexual assault convictions impossible, or at least very hard to secure given a competent defense. While it can be found in the scientific literature, it is worth mentioning that it is widely disseminated in the press (e.g. Brody, 2011) and in the public consciousness of law professionals and of the general public.

This account is compelling, as it coheres well with the experiences of victims, but there might also be grounds for doubts. After all, prosecutors do manage over convictions in over a thousand cases every year in Canada, and these might not be all due to inadequate defense. Furthermore, it is not clear that sexual assaults are the only crimes whose perpetrators commit far from prying eyes: one might argue that, in fact, most criminals want to avoid witnesses. And while consent is indeed evanescent, so are threats when they are uttered. Yet, to our knowledge, the accuracy of the Structural Impossibility account has yet to be empirically confirmed.

The stakes here are important, because while this account has the merit of inviting scrutiny on a system that systematically fails the victims, it can also affect their agency within the justice system and compromise their capacity to speak of their own experience and take control over the narrative of their lives. If victims believe that they cannot secure a conviction, they are unlikely to seek remedy in a criminal court. And if the message that they get is that the courts will systematically undermine their credibility and rule against them, they might reasonably conclude that they are unlikely to be deemed credible by other officials, or even by their peers. While survival might require them to learn those lessons if the Structural Impossibility account is true, it is easy to see that they might be harmful if it wrong.

In this paper, we propose to test the Structural Impossibility account by comparing sexual assault trials to a similar kind of crime. In Canadian criminal law, assault is most similar to sexual assault, sexual assault being a special case of assault and both charges being defined largely in terms of consent. Assault thus offers a point of comparison to observe this difference in treatment¹. We ask two questions: (1) Is it true that sexual assault victims’ testimonies gets more scrutiny? (2) Is this discrepancy due to the conditions in which rape occurs, including the absence of witnesses? We sought to provide some answers to these questions through the analysis of a corpus of court decisions from the Cour du Québec (QCCQ) and the Cour d’appel du Québec (QCCA).

¹For this insight, and for her permission—and encouragements—to pursue it, we are grateful to Alice Livadaru

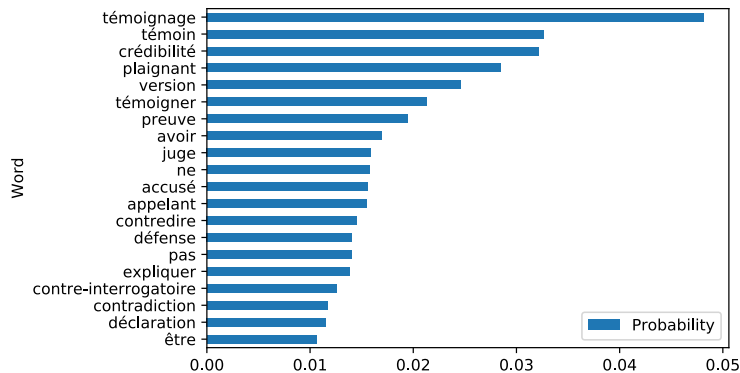


Figure 1: Distribution of topic 45 over word tokens, top 20 words

1 Experiment 1: Discussions on testimony

One central aspect of the Structural Impossibility account is that victims’ testimonies have their credibility challenged. On the one hand, this challenge is brought about by the specific circumstances of sexual assaults: lack of third-party witness, subjectivity of consent, etc. On the other hand, it is through this challenge that defendants can impact the verdict and secure an acquittal. This is why we first wish to have an idea of the extent to which testimonies actually get scrutinized.

To get a sense of this, we gathered a corpus of 7227 decisions from the Cour d’appel du Québec (QCCA) published between 2000 and 2014, and 25018 decisions from the Cour du Québec (QCCQ) published between 2000 and 2020². We then created a topic model³, and identified topic 45 (cf. figure 1) as indicating discussions about testimony. We then applied the model to the whole corpus to infer which decisions contained discussions of testimony, and in which proportion. Finally, we used the decisions’ metadata to determine which ones were about sexual assault (C-46, art. 271-3) or assault (C-46, art. 265-70) cases⁴.

²The Cour d’appel is an appeal court, the highest at the provincial level, while the Cour du Québec is a first instance court. While, in Quebec, assault cases are often heard at municipal trials, more serious offenses, including rape trials, are typically first heard at the Cour du Québec. QCCA decisions were extracted from La Référence (all of the annotated judgments were sampled. Cf. Chartrand et al., 2016), while QCCQ decisions were randomly sampled from CANLII’s collection, which counts 392 713 decisions from the Cour du Québec, most of them in the 2000-2020 range.

³We used the Gensim (rek and Sojka, 2010) implementation of Hoffman’s *et al.* (2010) online LDA algorithm, with $k = 150$.

⁴In the QCCA subcorpus, we used annotations from the database: “AGRESSION SEXUELLE” for a sexual assault, “VOIE(S) DE FAIT(S)” for an assault. In the QCCQ subcorpus, we used references to articles from the criminal code: if any of articles 265-270 were referenced, we assumed it was an assault trial, and if any of articles 271-3 were referenced, we assumed

This method relies on some assumptions. Firstly, we make the assumption that court decisions are the right corpus to measure how much impactful scrutiny is being paid to testimonies, with regards to the Structural Impossibility account. Court decisions are not transcripts of a trial, but rather an account, by the judge, of the reasons that led to the verdict. Therefore, one might wonder if it can reflect how long and gruesome testimony hearings can be. However, for our question, the experience of the testimony is much less important than the extent to which it informed the verdict. Given that judges are compelled to address the concerns voiced by prosecutors that have potential to affect the verdict, lest the case be appealed, it is reasonable to think that they would write more about testimonies when they are being scrutinized in a way that could jeopardize the conviction.

Secondly, we assume that a LDA model can capture the proportion of text that is employed discussing a topic. While there are discussions about what the latent variables of a LDA model mean when it is learned from textual data (e.g.

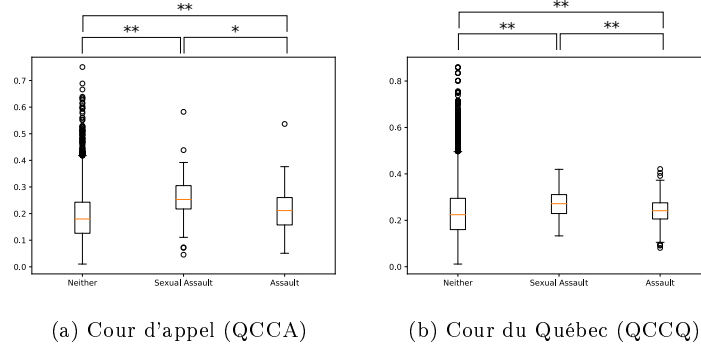
Blei, 2012; Allen and Murdock, 2020), and while it is sometimes obvious that so-called LDA topics sometimes capture regularities in texts that do not reflect what the text is about, there is a consensus that LDA can capture interpretable topics, and do so most of the time (for some evidence for this claim: cf. Chang et al., 2009).

Thirdly, we assume that topic 45 can capture discussions about testimony. Topics are associated with probabilities of specific words to be present; this distribution over word tokens is what we use to determine if they are likely to be expressed in a text segment. The most probable words when topic 45 is expressed are shown in figure 1: we can clearly see that these are words strongly associated with testimony, or words that directly refer to them. A careful analysis of the topic model using LDAvis (Sievert and Shirley, 2014) revealed that no other topic from the model seem to give much importance to the words associated with testimony. This suggests that if judges want to discuss testimony, they would need to use those words, so expression of topic 45 should be a good indicator for discussions on testimony.

If the Structural Impossibility account is true, we would expect that verdicts for sexual assault would rely a lot on the analysis of the credibility of witnesses, and therefore, that there would be more discussions on the topic of testimony in sexual assault decisions than in assault decisions. As figure 2 illustrates, in both corpora, the proportion of discussions on the topic of testimony is higher in sexual assault trials than in assault cases, and it is also higher in both cases than in cases that are neither assault nor sexual assault cases. This effect is significant.

This is *prima facie* congruent with the Structural Impossibility account. However, one might wonder if, at least under a strong interpretation of the Structural Impossibility account, where (1) a good defense would make it literally impossible for there to be convictions, and (2) sexual assault would be special and unique in that regard, if this gap between sexual and nonsexual

it was a sexual assault trial.



** : distributions are significantly different with $p < 0.01$
 * : distributions are significantly different with $p < 0.05$

Figure 2: Distributions of the proportions of topic 45 expression in decisions

assault should not be more important.

2 Experiment 2: Circumstances of crime as the root cause

The Structural Impossibility account claims that some circumstantial factors that are both intrinsic and specific to rape are causing the difficulty encountered by complainants to be believed. In order to explore this claim, one of us annotated 73 QCCA decisions (including 35 sexual assaults) and 99 QCCQ decisions (including 49 sexual assaults) on sexual or nonsexual assault cases.

These decisions were coded on four variables⁵: implication of witnesses, crime scene, prior relationship between defendant and complainant, and conflicting testimonies. The first variable, implication of witness, records whether the testimonies were given by the implicated parties (the alleged victim(s) and/or perpetrator(s)), third parties, both of them, or neither. Because we are interested in testimonial sources of information on the facts of the matter for the sake of the verdict, we understood “testimony” not in the limited sense that is used in trial, but so as to include audio/video or written accounts that could be presented to trial, verbalizations, and even accounts that were presented by the defense or prosecution on behalf of the person they are representing, even when they didn’t testify in court. As it turns out, in no case do we get only testimonies from third parties, so this category was removed. The second variable, crime scene, codes for whether the crime took place in a public place, such as a park, a bar or the streets, in a private place, such as a workplace, or in a residence, be it that of the complainant or defendant. The third one, the prior relationship

⁵The protocol will be made available at an ulterior date.

between the two parties, codes for how close the defendant and complainant are at the time of the events: whether they are partners (spouses or in an intimate relationship), family (but not partners), whether they know each other (but aren't family nor partners) or whether they never met before. Finally, the fourth variable codes for whether there was conflict in the testimonies on a substantial aspect of the facts.

These annotations allow us to test the causal story at the root of the Structural Impossibility account: how the circumstances that were coded for are specific to sexual assaults (§2.1), how they should raise the scrutiny on testimonies (§2.2), and how they mediate the relationship between type of crime and scrutiny on the testimonies (§2.3).

2.1 Circumstances and type of crime

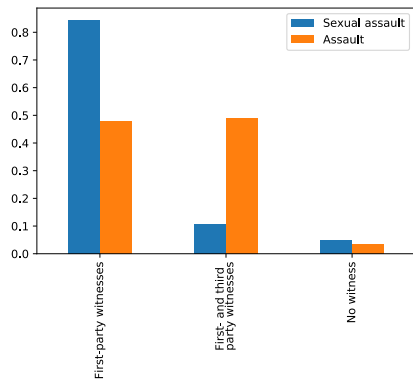
For there to be a systematically differential treatment of sexual assault trials, the Structural Impossibility account has to assume that there must be something structurally different about these offenses. The circumstantial factors we coded for correspond to candidates for distinguishing features that would make sexual assault appropriately special in the context of the trial. We would expect that, overall, rapes trials would only see testimonies from the implicated parties: because rape is a private affair, third-party witnesses would be rarer. We would also expect that the crime scene would usually be a private place, which would cause the same problem. Concerning prior relationship, they would often be a more intimate one, which would make it harder to eliminate consent as a reasonable assumption. Finally, while it might be more a feature of the trial than of the offense, conflicting testimonies might be an observable feature of other, more intrinsic features of sexual assaults.

Looking at the proportion of annotations by type of crime (figure 3), we see that some of those align reasonably well with the narrative of the Structural Impossibility thesis. While assault cases have a good proportion of trials with only first-party testimonies, the proportion is much higher with sexual assault cases. More assaults take place in a public space, while more sexual assault take place in the residence of either the defendant or the complainant. And a larger proportion of sexual assault cases feature conflicting testimonies.

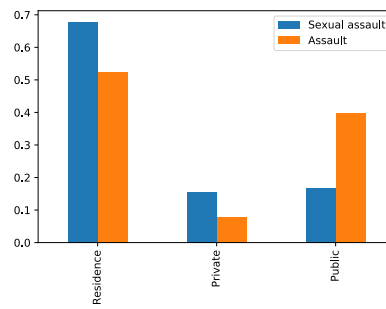
To test whether circumstantial factors can predict whether the trial is one of sexual or nonsexual assault, we performed a logistic regression (figure 4). While the regression model has a significant capacity to predict the type of crime in our subset of decisions (LLR $p < 0.01$), they can only account for about 11% of the variation. Furthermore, only two factors are shown to be significant: the implication of witnesses and the presence of contradictory testimony (one-to-one logistic regression models yield similar results).

2.2 Circumstances and testimony

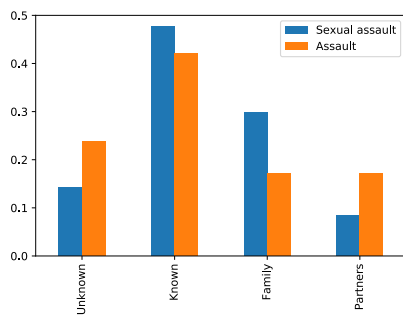
Another part of the Structural Impossibility story is that testimonies, and particularly the fact that victim testimonies are susceptible to being discredited, are a



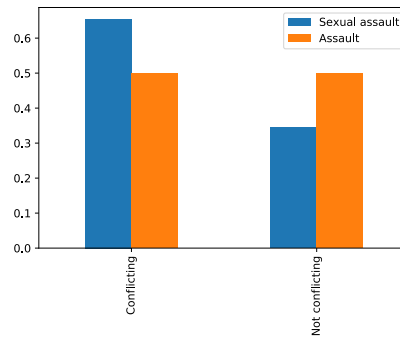
(a) Implication of witnesses



(b) Crime scene



(c) Prior relationship



(d) Conflicting testimonies

Figure 3: Proportions of annotations for sexual and non-sexual assaults

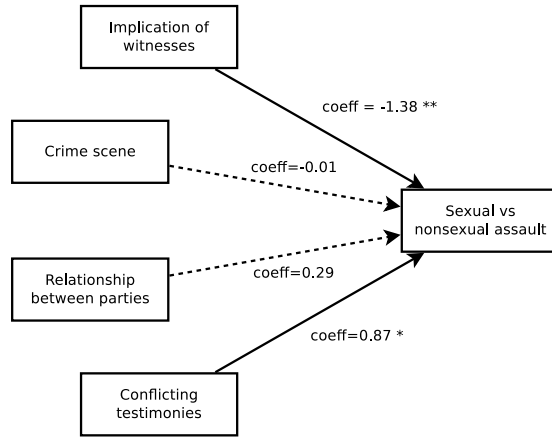


Figure 4: Regression coefficients for the relationship between circumstantial factors and the type of crime (pseudo- $r^2 = 0.11$, LLR $p < 0.01$)

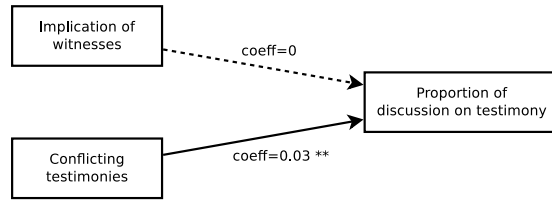


Figure 5: Regression coefficients for the relationship between circumstantial factors and the proportion of topic 45 ($r^2 = 0.06$, $p < 0.01$)

central mechanism in preventing defendants from being convicted. If there are no third-party witnesses, perhaps because it took place in a private place where witnesses are likely absent, the complainant’s testimony has to stand on its own, and, as such, we can expect the defense to raise questions about its reliability. If the defendant was close to the complainant, then the intricacies of their relationship might make it easier for the defense to offer a counter-narrative. This would lead to conflicting testimonies, which in turn would generate more discussions about those testimonies.

In this story, some variables are expected to act through another: the crime taking place in a private setting would drive the quantity of discussions about testimony through the absence of third-party witness, and the implicated parties being in a relationship would drive it through the presence of conflicting accounts. However, logistic regression reveals that how private the crime scene is cannot predict the absence of third-party witness, and that prior relationship cannot predict conflicting testimonies. Furthermore, neither of those factors can predict the proportion of text in the court decision expressing the topic of testimony, so we chose to leave them out of the equation.

Figure 5 illustrates the result of a linear regression (ordinary least squares),

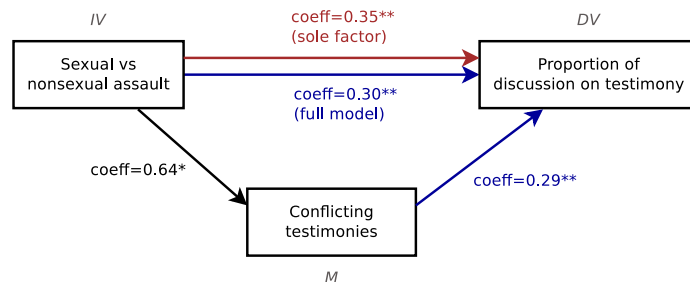


Figure 6: Regression coefficients for the relationship between type of crime and proportion of topic 45 mediated by the presence of conflicting testimonies

with the remaining factors being tested to predict the proportion of topic 45 (the “testimony” topic). While the model is significantly effective with $p < 0.01$, it only predict 6% of the variation, and one of two the factors, the implication of witnesses, contributes nothing to it.

2.3 Causal mediation by the type of crime

Finally, the Structural Impossibility account implies that the relationship between the type of crime and the scrutiny on testimonies is mediated by the inescapable structural factors that distinguish rapes. In other words: a crime being a rape brings about conditions which lead to victim testimonies being scrutinized. As we noted in the last section, most of the conditions we coded for have no predictive power on the amount of discussion allotted to testimonies, so there is only one factor that is susceptible to mediate this effect: conflicting testimonies.

The Baron and Kenny (1986) method for mediation analysis demands that four conditions be fulfilled for there to be a mediation between an independent variable (IV) and a dependent variable (DV) through a mediator (M):

1. A regression on $IV \rightarrow DV$ must find the IV’s coefficient to be significant.
2. A regression on $IV \rightarrow M$ must find the IV’s coefficient to be significant.
3. A regression on $IV + M \rightarrow DV$ must find M’s coefficient to be significant.
4. IV’s coefficient in the $IV + M \rightarrow DV$ regression must be lower than IV’s coefficient in the $IV \rightarrow DV$ regression.

As shown in figure 6, all four conditions are fulfilled, with the independent variable being the conflicting testimonies, the mediator being the type of crime and the dependent variable being the proportion of topic 45. However, the drop in the IV’s coefficient is very small (-0.05) and it remains significant in the full model. This suggests that other factors are more important in explaining the influence of the type of crime on the amount of discussions on testimonies.

3 Discussion

There are a lot of things that the Structural Impossibility account gets right. Topic 45 is more present in sexual assault decisions, which is coherent with victim testimonies getting more scrutiny. Key circumstantial factors, like the presence or absence of third-party witnesses or conflicting testimonies, can predict whether a crime is a rape or a nonsexual assault. One of these factors can also predict the proportion of discussion allotted to testimony in the decisions. Finally, it is partly because sexual assaults trials are more likely to feature conflicting testimonies that their decisions contain more discussions on testimonies.

However, all of these effects are mild. The proportion of testimony discussions is high for both sexual and nonsexual assault compared to other crimes, and an assault being a sexual assault only raises this proportion by 3%. If victim testimonies were overscrutinized to the point of making convictions very hard to secure, we would expect judges to spend more than 3% of the trial on questions about the testimony that only come up in sexual assault trials. Secondly, of the factors we coded for, only two, the implication of witnesses and the presence of conflicting testimonies, can actually predict an assault being a sexual assault, and the combined model only accounts for 11% of the variation. If the circumstances reflected in those factors were specific to sexual assaults, we would expect this model to be more powerful. Thirdly, of the same factors, only conflicting testimonies predict the amount of discussions on testimony, and the full model only accounts for 6% of the variation. Again, if these factors were effective in opening opportunities for the defense to scrutinize, we would expect it to have more impact on the content of decisions. Fourthly, while we found a mediation of conflicting testimonies between the type of crime and the proportion of topic 45, it only accounts for a very small portion of the effect (a bit less than 15%), which remains significant even when the mediation is controlled for.

An additional worry about this account is that it isn't clear that it coheres with statistical data reported by Canadian authorities about the success of assault prosecution. While it is true that, in Canada, nonsexual assault prosecutions are overall more successful (cf. figure 7a), this effect is small and cannot be observed in all provinces—in fact, in Quebec, sexual prosecutions have been more successful in the last two decades. This effect can hardly be pinned down on an unwillingness to charge on the part of police forces and prosecution: while slightly higher in nonsexual assaults (cf. figure 7b), sexual and nonsexual assaults that are reported or otherwise known to police are charged at comparable rates.

We must conclude that while the Structural Impossibility account captures a causal story that is coherent with our findings, it greatly overestimates its importance and the effect it might have on the prospect of convicting sexual offenders.

There are, of course, limits to our findings. Firstly, we focused on our home province of Quebec, which happens to have a relatively high rate of convictions for sexual assaults. Of course, if the Structural Impossibility account is taken

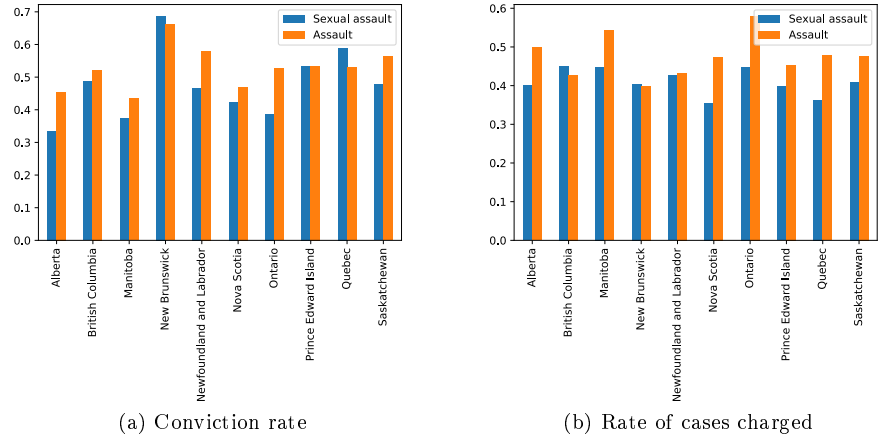


Figure 7: Conviction rate and rate of cases charged for sexual and nonsexual assault trials by Canadian province, 2000-2018 (Statistics Canada 2020a,2020b)

at face value, it should make little difference, because a structural impossibility should be impossible in any jurisdiction. However, one might argue that focusing on a jurisdiction that has been more successful at convicting offenders might lead us to underestimate the challenges faced by prosecutors in other jurisdiction.

Secondly, we did not code for all of the factors that play a role in the causal story of the Structural Impossibility account. For example, Baker suggests that rapes might occur disproportionately when the victims are affected by drugs or alcohol, that the experience of a rape might be more traumatic, and both of these factors would negatively affect the recollection and make the testimony easier to challenge. This might give us factors that would better capture what’s unique about sexual assault, and maybe even reframe it as a truly unique offense—but then again, nonsexual assault also disproportionately happen when people are under influence, and they can be fairly traumatic. This said, even if “ideal” factors were found, the small difference in the proportion of discussion on testimonies and in conviction rates would still suggest that the story put forward by the Structural Impossibility can only amount to a structural challenge.

Thirdly, according to Statistics Canada’s General Social Survey, only 5% of sexual incidents were reported in 2014, compared to 38% for nonsexual assaults (Perrault, 2015). We cannot discount the possibility that these missing reports concern cases that would be much more difficult to prosecute, and that it is the reason why they are not reported. This said, while we know that sexual assault victims often perceive the authorities as powerless in bringing the offenders to justice, other factors, such as revictimization and fear of reprisal are likely also at play (Kidd and Chayet, 1984). And even if it turned out that the perceived lack of evidence was the main reason why victims fail to report, it wouldn’t be unreasonable to think that the guilt and shame associated with being a victim

of sexual abuse might lead the victims to underestimate the power of their testimony.

Our findings suggest that sexual assault is prosecutable, even if it might sometimes be somewhat more challenging, which is good news for those who see convictions as playing a positive role in addressing sexual offenses. But no matter what one’s opinion is concerning prosecution, conviction and punishment, the Structural Impossibility account seems dangerous in that it suggests to victims that they are more powerless and less likely to be listened than they actually are. This might turn the Structural Impossibility account into a self-fulfilling prophecy: in promoting a narrative that emphasizes the powerlessness of authorities in prosecuting sexual offenders, it might be preventing victims from finding justice through a conviction. It might also comfort offenders in their impunity. But the most troubling thing about it is probably that, in doing so, it suggests to victims that they are less of an agent and less of a knower than they actually are: if it proved effective in transmitting this message, it would likely contribute to silencing the victims and removing options that they might otherwise consider.

One might counter that the Structural Impossibility account validates the felt experience of victims going through the process of reporting and prosecuting their rapist. This certainly contributed to make it a compelling narrative about rape prosecutions. And indeed, there would be no progress in replacing this narrative with one that gaslights victims and minimizes their suffering. However, surely we can find a narrative that validates victims without risking of silencing them further.

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