

# Having None of It: A Rebuttal to “Rape, Suicide, and the Rise of Religious Nones”

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## Abstract

In the previous issue of this journal, Phillip Truscott published an article entitled “Rape, Suicide, and the Rise of Religious Nones” (2024) which found that the crude proportion of nonreligious individuals correlated with the crude rates of rape and suicide in the USA. He concluded that increases in the number of nonreligious individuals were causally linked to higher rates of rape and suicide. We note, among other things, that in his introduction he provides no meaningful justification for his thesis, he selected an odd analytical period, he erroneously treated self-control as the sole predictor of rape and suicide, his argument structure is logically fallacious, and he ignored or mischaracterized the extant literature addressing religion and attitudes towards rape. With respect to his analyses, he used simple correlation to advance a causal argument, he failed to consider reverse causality, he used an objectively incorrect analytical approach in several of his figures, and he mislabeled, misdescribed, or mischaracterized the content of one of his tables. As for his discussion, he significantly overstated the actual meaning of his results, he poorly defended why a causal relationship exists, and he mischaracterized the existing literature on drug consumption and rape to advance his argument that drug consumption mediated his observed findings. While Truscott’s research question was excellent, his work addressing said question was uniformly deficient.

**Keywords:** Self-Control Theory; correlation; replication; rape myth acceptance; social bonds

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The *Journal of Sociology and Christianity* recently published an article by Phillip Truscott entitled “Rape, Suicide, and the Rise of Religious Nones” (2024). In it, Truscott reasons that because religion is a source of both self-control and social bonds—themselves predictors of rates of rape and suicide—declining rates of religious adherence will predict general increases in rape and suicide. Essentially, nonreligious people lack the self-control and social bonds necessary to discourage these antisocial actions. In his article (and subsequent media interviews<sup>1</sup>), Truscott concludes that nonreligion is a significant cause of rape and suicide in the USA. While Truscott’s analysis is limited to the USA, the underlying causal mechanism can be theoretically applied across the world. From the start, we will acknowledge that Truscott’s question is a valid topic of investigation. The idea of exploring how religious disaffiliation impacts attitudes, beliefs, and behaviors is a worthwhile scientific endeavor. Furthermore, Truscott provided sufficient information with which to replicate his results. With these acknowledgments granted, Truscott’s study has significant deficiencies in its impetus, literature review, reasoning, analytical approaches, description of findings, and conclusions.

## Foundational Issues

In this section, we will show that Truscott’s introduction was an exercise in confirmation bias because he only referenced supporting views and did not engage with any relevant dissenting literature.<sup>2</sup> These omissions are clear at several key points of the author’s argument, including (but not limited to) the rationale connecting nonreligion and rape and suicide, the assertion that religion and the reporting of rape are unrelated, the support for Self-Control Theory as a theoretical foundation, and the strength of the religion/self-control relationship. Because Truscott did not engage the full extant literature, the assumptions he uses in later analyses are unjustified, resulting in the conclusions he draws as being inherently suspect.

### *Unclear Rationale for the Study*

At a very basic level, Truscott’s rationale for his study and his method of proceeding were unclear. He stated in his introduction that “This article explores how one type of social

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<sup>1</sup> <https://www.dailysignal.com/2024/11/17/rape-campus-rape-suicide-increase-religious-nones-groundbreaking-research-shows/>

<sup>2</sup> Truscott did critique Zuckerman (2009) extensively, who argued that there is no evidence that [nonreligious] individuals are predisposed to crime. We do not address this for two reasons: 1) Truscott’s comments on Zuckerman’s work seemed to miss the point that Zuckerman was making, and 2) these criticisms did not matter to the point that Truscott was making. Even if there is positive evidence that nonreligious individuals are predisposed to violent crime (there is not), Truscott did not measure this in his eventual study. Interestingly, our findings in Figures 3 and 4 are consistent with Zuckerman’s conclusions that the nonreligious are not predisposed to crime.

bond may impact acts of violence: bonds connected with religious affiliation” (35), and he goes on to state that “Beginning in the late 2010s, the general population rape rate and the ‘no religion rate’ in the 50 USA states start to correlate significantly. If declining religious affiliation represents a loss of an important social bond that buttresses self-control, then this finding would be an important corroboration of the general theory of crime” (35). A reasonable reading of this passage is that Truscott noticed a correlation between nonreligion and rape, and then tested whether self-control and social bonds were relevant to this relationship.

This is not what happened.

Truscott did not test self-control, did not measure social bonds, and did not assess whether nonreligious individuals were more likely to commit rape or suicide. Instead, Truscott’s Results section is a detailed description of the correlation between the proportion of Nones, rates of rape, and rates of suicide. To emphasize this point, Truscott noticed a correlation between the proportion of Nones and rates of rape, and then instead of testing whether this supported the general theory of crime (i.e., Self-Control Theory), he simply confirmed that this correlation existed (notably, he also added suicide as an outcome). Functionally, Truscott’s reasoning is an elaborate example of *affirming the consequent*, and his thesis can be summarized as follows:

“Rape and suicide are a product of reduced self-control and social bonds. Religion promotes self-control and social bonds. Therefore, rises in rape and suicide are a product of nonreligion.”<sup>3</sup>

Because Truscott does not assess self-control, social bonds, or (crucially) who is committing rape and suicide, he never actually tests his thesis. He simply points to a crude correlation and asserts that the rise of the Nones is responsible for driving up rates of rape and suicide.

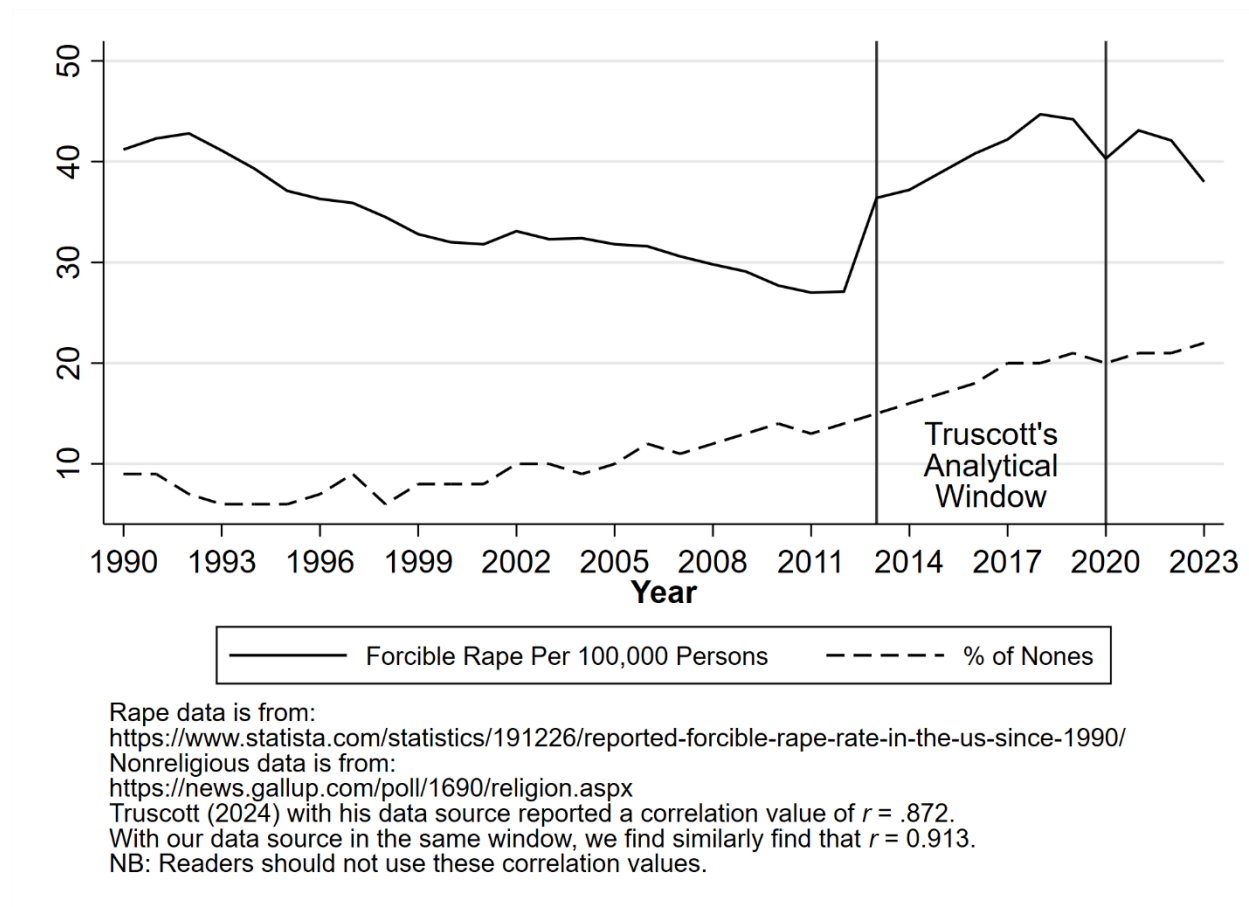
As noted above, Truscott explicitly states that “Beginning in the late 2010s, the general population rape rate and the “no religion rate” in the 50 USA states start to correlate significantly [emphasis ours]” (35). This phrasing is problematic because it implies that, at some point, these variables did not correlate significantly. As can be seen in Figure 1, nonreligion rates in the USA have climbed steadily since the 1990s, while forcible rape cases fell for two decades straight (until 2012). Similarly, as can be seen in Figure 2, suicide rates have climbed steadily since 2000, but did not have an explosive growth between 2008 and 2020 when the proportion of Nones increased dramatically. We are unsure if Truscott examined historical trends and

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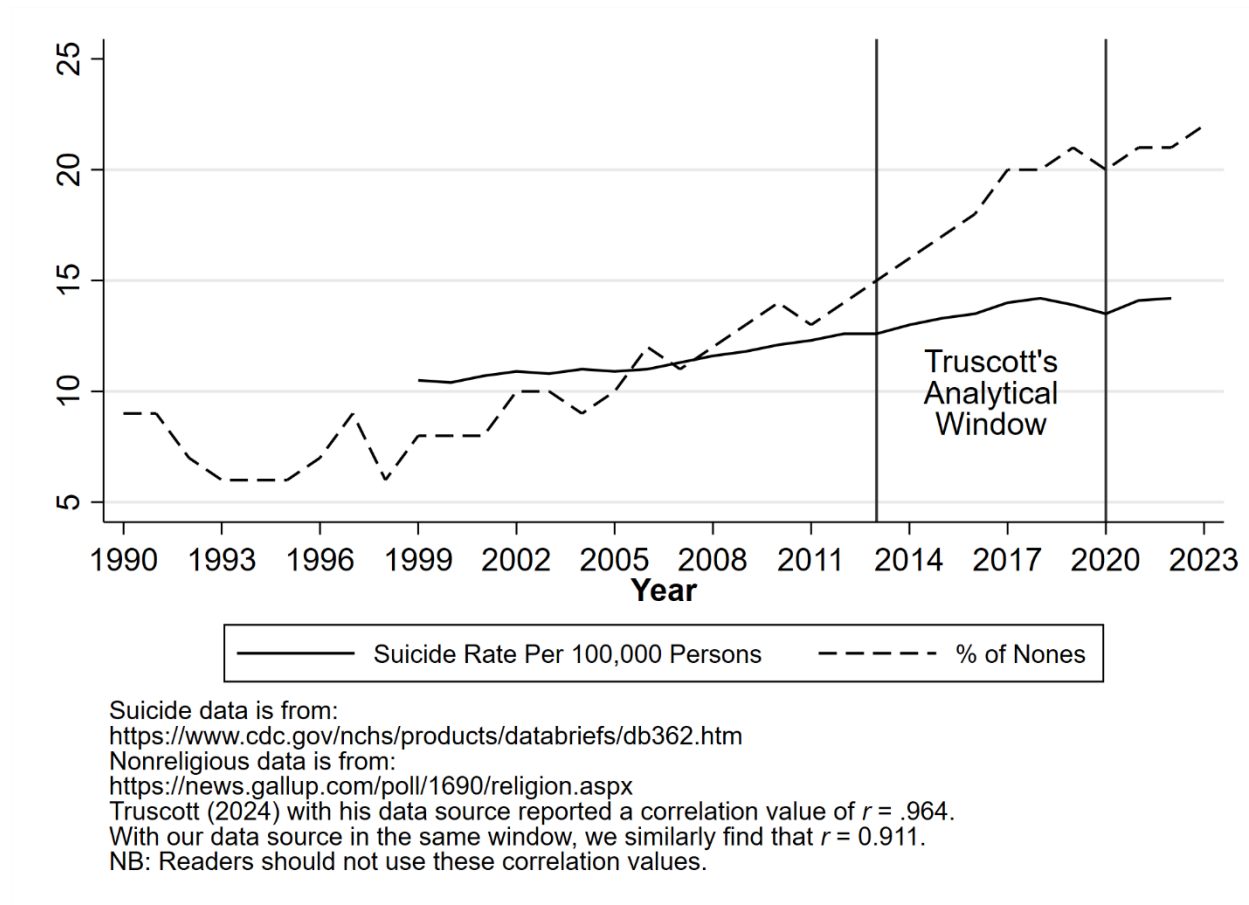
<sup>3</sup> All men are mortal. Mittens the Kitten is mortal. Therefore, Mittens the Kitten is a man.

simply chose the section of data that suggested a positive relationship,<sup>4</sup> because there is nothing in his investigation to suggest why the periods outside of his analytical window should not see the same pattern. If Truscott did indeed select the analytic period with this method, then it is qualitatively indistinguishable from *p*-hacking, a process in which researchers will sift through many models and variables until they find statistically significant relationships they wish to report. One possible explanation is that Truscott relied on state-level data for a portion of his analyses that did not exist prior to 2013, but this is only a partial explanation, because he could have shifted to a different data source or reframed his research question. Functionally, Truscott appears to have either deliberately selected the one period in which this relationship existed, or by sheer happenstance selected the one period in which this relationship existed.

**Figure 1:** *Historical data on rape and religious disaffiliation.*



<sup>4</sup> This is implied in Truscott's writing but may simply be an ambiguity in his description of his process.

**Figure 2:** *Historical data on suicide and religious disaffiliation*

### ***Perceptions of Rape are Unrelated to Religion***

A significant proportion of Truscott's introduction assumes that religion and the reporting of rape are unrelated, that is, regardless of how religious or nonreligious a person is, they will perceive rape the same way. This point is crucial to Truscott's thesis, because if religion predicts whether an action is perceived as rape, then measuring the relationship between religion and rape is significantly confounded. Truscott cited Piggott and Anderson (2023) as evidence that rape acknowledgment is unaffected by religiosity, and he cited Navarro and Tewksbury (2018) as evidence that religiosity is unrelated to the acceptance of rape myths. Let us consider these two points individually.

Truscott accurately reports that Piggott and Anderson (2023) found that religiosity (i.e., importance of religion) did not predict whether rape was acknowledged. This is technically true, but Truscott misses the broader point that Piggott and Anderson were making (one that derails his later conclusions). Those authors demonstrated that the experience of rape, more than any other trauma, was systematically linked to decreased engagement with religion. They explicitly

note that individuals who experienced rape were more likely to leave their religion and report decreased religious activity. In other words, there will be a systematic relationship between religion and rape because rape survivors are more likely to disaffiliate from their religion; conceptually, rape *drives* disaffiliation.<sup>5</sup> Importantly, Piggott and Anderson (2023) found that the religiosity-rape acknowledgement connection was mediated by acceptance of rape myths. Specifically, extrinsic religiosity was positively associated with acceptance of rape myths, which in turn was negatively associated with acknowledgement of rape. These details, which counter Truscott's argument and are present within the cited literature, are not present within his *summary* of the cited literature.

Truscott uses Navarro and Tewksbury (2018) as evidence that religiosity is unrelated to acceptance of rape myths, but ignores Piggott and Anderson's (2023) aforementioned work on this. Confusingly, Truscott summarizes Navarro and Tewksbury's (2018) work as follows: "The study did not find evidence that greater religiosity predicted greater rape myth acceptance" (37). He also pulls a quote from their abstract: "The least religious (Agnostics and Atheists) reject rape myths, whereas the most religious (Baptists and Presbyterians) show non-relationships with rape myths. Catholics accept rape myths, and religiosity functions as a moderator as highly religious Catholics reject rape myths" (80). Contrarily, Navarro and Tewksbury (2018), in their results section, not their abstract, reported that "Turning over to religiosity, greater levels of faith [were] statistically correlated with a greater acceptance of rape myths. Only Catholics showed statistically significant relationships to the acceptance of rape myths even though Baptists and Presbyterians exhibited greater [religiosity] scores" (88). This is qualitatively different than a null relationship that Truscott described. Furthermore, Navarro and Tewksbury (2018) found that atheists and agnostics were especially likely to reject rape myths. This systematic rejection of rape myths implies that nonreligious groups are less likely to excuse rape and are more likely to report it, which would also result in Truscott's observed positive correlation later in his article.

While it is impossible to review every study relevant to one's topic, Truscott's description of the extant literature is less than adequate, and he ignored the large number of studies addressing rape myth acceptance and religion. Owens, Hall, and Anderson (2021) found that beliefs about purity culture explained 64% of rape myth acceptance. Barnett, Sligar, and Wang (2018) found that religiosity explained 6% of rape myth acceptance, and atheists and agnostics were more likely to reject rape myths (4% of rape myth acceptance variability was explained by

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<sup>5</sup> This is a simplification – while experiencing sexual assault made it more likely for survivors to report reduced engagement in religion, a smaller proportion of survivors reported greater engagement afterward.

these nonreligious identities). Navarro and Tewksbury (2017) also found that higher religiosity explained about 1% of variability in the acceptance of rape myths. Prina and Schatz-Stevens (2020) found that religiosity explained 3% of rape myth acceptance in a joint American/Italian sample. Rimmer and Birch (2019) found that 11% of variability in rape myth acceptance was explained by religiosity. Freymeyer (1997) found that 16% of variability in rape myth acceptance was attributable to religiosity (in men).<sup>6</sup> Other studies found positive associations between religious fundamentalism and rape myth acceptance (Ensz and Jankowski 2020). Although these relationships are likely inflated due to their bivariate nature, it is evident that a significant, positive, and well-researched relationship exists between religion and rape myth acceptance. Overall, Truscott 1). failed to demonstrate equivalence between how the nonreligious and the religious perceive rape, and 2). ignored strong evidence of non-equivalence. These omissions are a critical flaw, as his eventual analyses require reporting of rape be independent of religion, which they clearly are not.

### ***Sufficiency of Self Control Theory***

Truscott uses Gottfredson and Hirschi's (1990) Self-Control Theory as a theoretical frame for his analysis. While self-control has been linked to both the commission of sexual assault (Franklin, Bouffard, and Pratt 2012) and to suicidality (Martin et al. 2023; Nofziger and Callanan 2016), low-to-moderate correlations are reported between these variables. Put differently, there are many other factors that relate to both suicide and rape with which Truscott does not engage or even acknowledge. In a sense, Truscott describes a piece of the puzzle as the puzzle itself. On this point, Burt summarizes Self-Control Theory with, "No doubt, [Self-Control Theory] contains several valuable insights, and tests of the theory have significantly advanced criminological knowledge; yet, the theoretical assumptions are untenable, and the propositions oversimplify and distort a more complicated reality" (2020:65). Because Truscott presents Self-Control Theory without any of these qualifiers, the reader is given the impression that self-control is the driving force behind rape and suicide, which artificially flattens the complex roots of both.

Problematically, and similar to his interpretation of Piggott and Anderson (2023) and Navarro and Tewksbury (2018), Truscott has a selective reading of the extant literature connecting self-control and rape. Truscott cites Franklin et al. (2012) who explicitly tested whether self-control would predict sexual assault, specifically in fraternity students. Truscott reports Franklin et al.'s (2012) relevant findings to be: "individuals who reported sexual assault had significantly lower levels of self-control than those who did not" (1468), which is technically

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<sup>6</sup> This is an approximation based on a  $\tau_b$  statistic being converted into Pearson's  $r$ .

true. However, Franklin et al. (2012) appear to be referring to a simple *t*-test based on their descriptive data and had much more to say on the topic. Those authors went on to calculate whether male self-control predicted rape once social factors were controlled. They found self-control was *not* directly linked with the commission of sexual assault and drew explicit attention to this non-significant finding in their discussion: “It is important to note the absence of a direct significant effect from self-control to sexual assault, refuting Gottfredson and Hirschi’s (1990) predictions” (p.1470). Truscott used Franklin et al. (2012) to justify that rape could be viewed as a part of Self-Control Theory but failed to mention that the authors of that study explicitly refuted that theoretical lens.

### ***Religion and Self-Control***

Truscott makes the point that religion is positively associated with self-control, because this is relevant to his thesis. He cites a review by McCollough and Willoughby (2009) who reported a positive association between religion-oriented variables and self-control. However, there was a degree of nuance to these findings that Truscott glosses over. McCollough and Willoughby (2009) described several findings that were from all-religious samples<sup>7</sup> (Aziz and Rehman 1996; Bergin, Masters, and Richards 1987; French et al. 2008; Richards 1985), and which cannot be generalized to the nonreligious. When examining general samples and attending to how much variability in self-control is accounted for by religiosity we see that Bouchard et al. (1999) reported that it accounted for 4% in a sample of adult twins, Longshore et al. (2004) found it accounted for 9% in a sample of adult male drug offenders, Pfefferbaum and Wood (1994) reported it accounted for 2% in a sample of undergraduates, Walker et al. (2007) reported it accounted for 6% in a sample of adolescents,<sup>8</sup> Welch, Tittle, and Grasmick (2006) reported it accounted for 9% in a sample of adult Oklahomans, and Wills et al. (2003) reported it accounted for 5% in a sample of children. To be clear, while it is evident that religiosity has some connection with self-control, it is equally obvious that there are many other factors contributing to its presence or absence. On the high-end, religiosity explains only 10% of the variability in self-control,<sup>9</sup> and because most of those reported relationships were bivariate, the real proportion of variability is likely less than 10%.<sup>10</sup> Truscott functionally argues that because A is correlated with B, and B is correlated with C, and C is correlated with D, therefore changes in A are a product of changes in D, here when A = Rape, B = Self-Control, C = Religiosity,

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<sup>7</sup> Or recruited from private religious schools.

<sup>8</sup> This is a rough approximation and is based on their standardized  $\beta$ -value.

<sup>9</sup> This is a back-of-the-envelope calculation based on the literature Truscott cited.

<sup>10</sup> It is ironic that Truscott emphasizes the strength of the relationship between self-control and religiosity, given that the relationship between rape myth acceptance and religiosity—which he treated as non-existent—was larger!



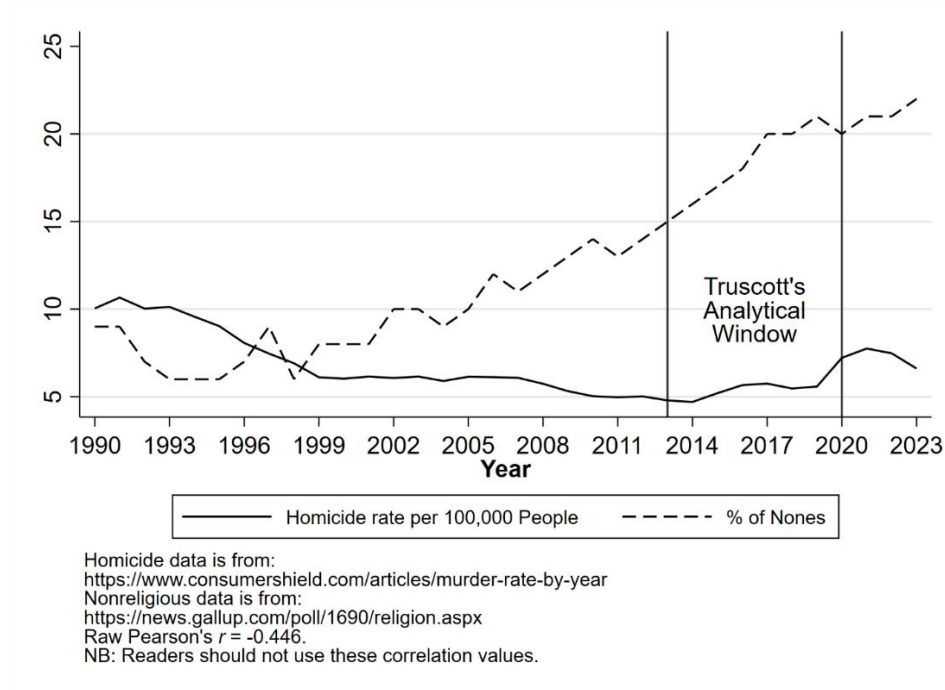
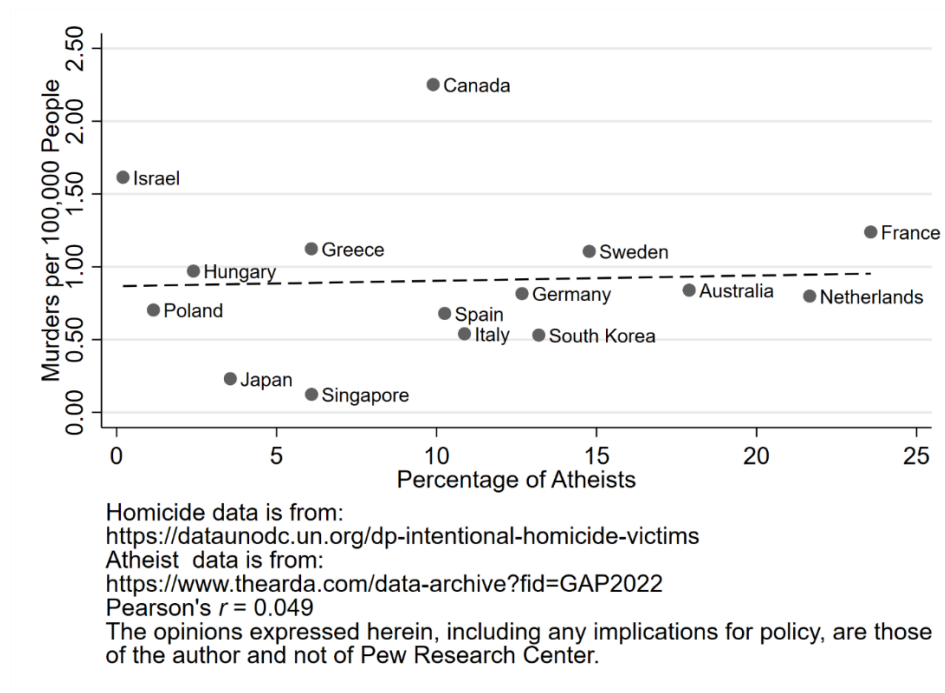
and  $D$  = Crude Proportion of Nones. Compounding previous errors, Truscott makes a causal argument that changes in  $A$  are largely the product of changes in  $D$ , despite offering no evidence that this is the case.

### ***Why Focus on Rape?***

Stepping back from these issues, let us consider the theoretical lens that Truscott has set in place. He has argued that sexual assault specifically, but violent crime generally, is a product of lack of self-control. He has additionally argued that religion is a driver of self-control and is negatively related to crime. He also repeatedly notes that, as far as violent crime goes, rape is underreported for a variety of reasons. But then why focus on rape at all? An obvious and better alternative to assessing the rape rate is assessing the *homicide rate*. In fact, Truscott's framing of his study suggests that this would be the ideal and perhaps ultimate way to test the self-control hypothesis. While homicide is underreported to some extent (Loftin, McDowall, and Xie 2017), we could find no evidence that it is more underreported than rape. Focusing on homicide also has the added benefit of a stable definition and fewer social taboos around its reporting. In Figure 3 we plot the national murder rate against the proportion of Nones since 1990 in the USA. As can be seen, the relationship is obviously negative; murder rates have declined while the proportion of Nones has steadily risen. When looking at international data in Figure 4, the rate of murder for 15 countries is plotted against the proportion of atheists in that country<sup>11</sup> and shows no relationship. These basic counterfactuals are inconsistent with Truscott's argument, despite being a better test of his theoretical lens.

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<sup>11</sup> We chose 2022 because it was the most recent year where we could access atheism data and homicide data. This graph is intended for crude illustrative purposes only. Countries will have different methods of tracking murder that may not necessarily be comparable.

**Figure 3:** *Historical data on homicide and religious disaffiliation***Figure 4:** *Data from 2022 illustrating the relationship between homicide and the percentage of atheists in a country*

## Analytic Issues

We believe that the section above shows Truscott's premises do not support his eventual conclusions, nor do they address the systematic issues with rape-reporting specifically. We also believe that even if these issues were remedied perfectly, Truscott's analytical approach is too fundamentally crude to lead to the refined conclusions he draws. In this section we will identify how incorrect inferences were drawn, how relevant confounding variables were ignored, and how a lack of clarity in the data presentation made replication initially impossible. In advance, we acknowledge that there is a degree of flexibility in how data analyses are performed, and honest actors can reach different conclusions because of dissimilar methods. With that recognition, we would like to emphasize that the issues we have identified are substantial, and not merely a product of minor differences in analytic approach.

### ***Correlation has Limited Utility***

Truscott uses correlation as his main form of analysis, which is surprising because correlation is only a descriptive tool. He implicitly chooses not to control for any confounding variable that would relate to his relationships of interest. Salient confounding variables in the relationship between nonreligion and rape/suicide include the proportion of males, average age of citizens, access to firearms, poverty rates, access to healthcare, etc. This is not a criticism of Truscott missing a relevant covariate, this is a criticism of Truscott missing every relevant covariate. We were disconcerted when reading Truscott's work because his strong conclusions were buttressed by nothing more than a bivariate descriptive statistic based on a chain of proxy variables.

Critically, Truscott interprets the rise in Nones as causing the rise in rape and suicide, when it is equally valid to interpret his results as indicating that the rise in rape and suicide cause people to disaffiliate from religion. To be clear, both interpretations are fallacious because they are based on a bivariate correlational model. This current section, which mirrors Truscott's bivariate approach, is intended as a cautionary tale about inferring causality from simple correlation. We modelled data regarding the proportion of Nones and the rate of rape from 1990-2023 using a crude, vector error correction model, which adjusted for the lagged values of Nones and of rape. Our results indicated that for each 1% increase in the rate of Nones, the rate of rape *fell* by 4.59 incidents per 100,000 people. Similarly, when using data from 1999-2023 with the same modelling details, we found for each 1% increase in the rate of Nones, the rate of suicide *fell* by 0.52 individuals per 100,000 people. On a bivariate level, there is better evidence that Nones exert a salubrious effect on society rather than a deleterious effect. At this juncture,

we would like to emphasize that we do not believe the causal explanation for rape or suicide is whether a person is religiously affiliated,<sup>12</sup> but we are emphasizing that using a basic form of analysis is an inappropriate answer to the question Truscott posed.<sup>13</sup>

### ***Violated Assumptions Leading to Incorrect Inferences***

In Truscott's Figure 1 and Figure 2 (not recreated here), he plotted the proportion of the nonreligious against rape and suicide rates on a national level. In the note attached to these figures Truscott reports the correlation rates for rape and Nones ( $r = .872$ ) and for suicide and Nones ( $r = .964$ ). These values are extraordinarily high, and for good reason: they are incorrect. While Truscott did report the correct raw correlation, this was not the correct analysis to perform. One of the underlying assumptions of correlation is *independence of cases*, which requires that the data from an observation not be intrinsically connected to the data from another observation. However, the rates of the nonreligious in 2014 will predict the rates of the nonreligious in 2015, meaning the data on Nones for 2014 and 2015 are not independent, and should not be modelled with a simple correlation. Because Truscott did not model these time series data correctly, the resulting correlations are massively inflated.<sup>14</sup>

As a point of hyperbolic illustration, let us argue that naming children "Eden" is a proxy measure of the religiosity of a country, because that name has religious connotations. In Figure 5, we plot the popularity of the name Eden against the reported suicide rate in the USA. The unadjusted correlation coefficient is positive, large, and is statistically significant ( $r = .951$ ). Should we conclude that religiosity drives suicide? No, that is absurd. Should we conclude that naming children Eden drives others to commit suicide? Of course not, that is equally absurd. However, Truscott's conclusion uses the same analytical approach to conclude that nonreligion, which is a strong correlate of religiosity, which is itself a weak correlate of self-control, which is itself a weak correlate of suicide and rape, is to blame for suicide and rape. Both sets of claims are comparably indefensible. Truscott finds the correlations in his Figure 1 and Figure 2 because time series data that have *any* trend will correlate with *any* other time series data that have *any* trend.<sup>15</sup> Finally, we were baffled by Truscott's incuriousness about his extraordinary effect sizes.

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<sup>12</sup> There are much more thorough, rigorous, and accurate ways to assess this relationship. Our rape model did not account for definitional change, neither model included covariates, we assumed a basic lagged structure, etc.

<sup>13</sup> In this vein, colleagues have informed us that *many* crude models of religion will also show a similarly positive relationship with negative, society-wide outcomes.

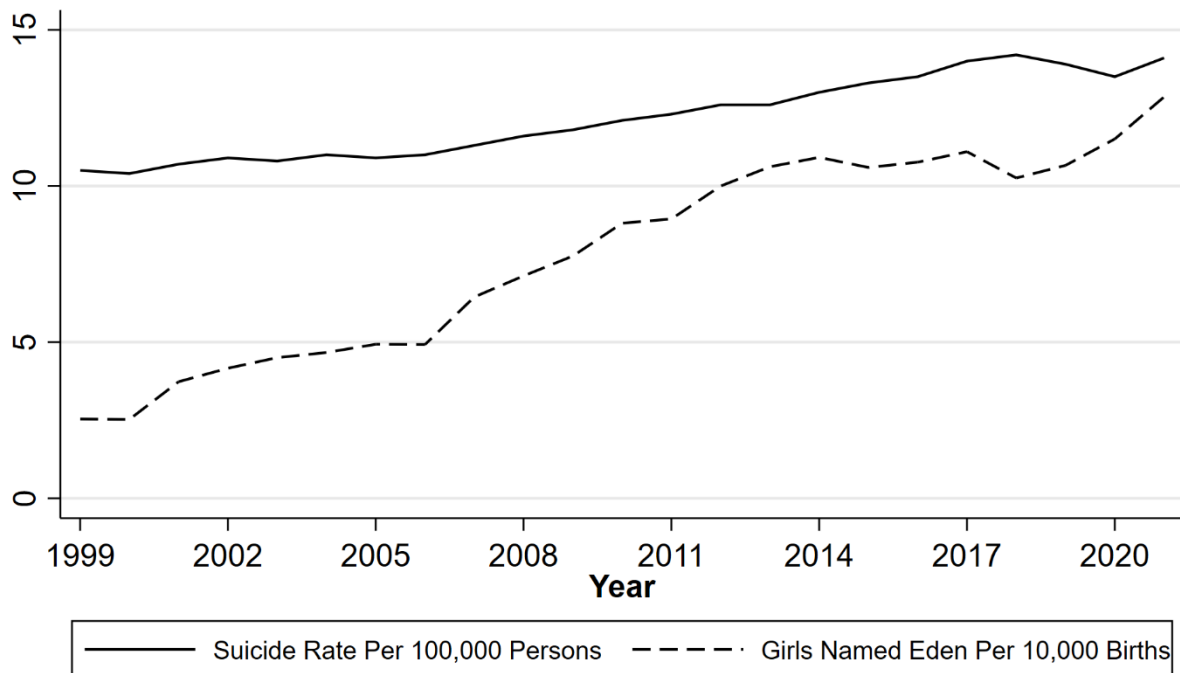
<sup>14</sup> Truscott's state-by-state analyses by year did not suffer from this specific deficiency.

<sup>15</sup> The curious reader may find the following correlations informative:

<https://www.tylervigen.com/spurious-correlations>

He implicitly suggested nonreligious affiliation explained 93% of the variability in suicide rate (unadjusted for covariates), which is substantially larger than the relationship between depression and suicide (May, Klonsky and Klein 2021; Riera-Serra et al. 2024)! It would be as though Truscott found apple consumption explained 95% of the variability in cancer survivability but spent no time interrogating this finding.

**Figure 5:** *Historical data on suicide and the popularity of the name Eden*



Eden data is from:  
<https://datayze.com/name-uniqueness-analyzer>  
 Suicide data is from:  
<https://www.cdc.gov/nchs/products/databriefs/db362.htm>  
 Raw Pearson's  $r = 0.951$   
 NB: Readers should not use this correlation value.

### ***Unclear Data Presentation***

Truscott explored the association between the proportion of completed rapes reported to the police by Census Region and the religious attendance of that Census Region (we have recreated Truscott's Table 3 below). The data for rape came from the National Crime Victimization Survey (NCVS) while the data for religious attendance came from Pew's Landmark Religion Survey<sup>16</sup>. The goal of Truscott's analysis was to establish that religious attendance is a

<sup>16</sup> The opinions expressed herein, including any implications for policy, are those of the author and not of Pew Research Center.

positive predictor of rape reporting, thus “these results fail to support the claim that the culture of more religious parts of the USA causes a suppression of rape reports” (47). Narratively, this portion of Truscott’s work is important because differential reporting caused by religiosity would render any analyses uninterpretable. This is a callback to his introduction where he attempted to demonstrate that rape reporting is not a product of religious factors.<sup>17</sup> This section of our critique was difficult to write because there were so many issues with Table 3 of Truscott’s article that it is impossible to address each of them comprehensively, although we summarize the larger issues below.

**Table 1**

Recreation of Truscott’s (2024) Table 3, “NCVS Reporting of rape and sexual assault by Census Region 2007-2014”.

	Northeast	Midwest	South	West
<b>Reported to Police (NCVS)</b>	29.1%	34.6%	47.6%	40.8%
<b>Religious attendance (PEW)</b>	30.4%	<sup>T</sup>	47.4%	<sup>T</sup>

<sup>T</sup> Truscott omitted these data in his table, without providing an explanation as to why.

First, Truscott mislabeled several elements of his table: “Table 3 shows the proportion of completed rapes reported to the police from 2014 to 2019 using data from the NCVS (BJS 2022)” (47). A literal reading of this description suggests that Truscott 1) only measured completed rapes (not attempted rapes, sexual threats, etc.), and 2) he used data from 2014-2019 for the table. It was only with the provision of Truscott’s syntax that we were able to replicate his values and to understand why we could not independently recreate his work. First, Truscott described the data as “completed rapes,” but it was not completed rapes, it was a broader summary of sexual assaults<sup>18</sup>. Second, the period under assessment was not from 2014 to 2019, it was from 2007 to 2014. These two errors compounded each other when attempting to replicate his findings. Also, we calculated different religious attendance values from the Pew data cited by Truscott,<sup>19</sup> but this is somewhat of a minor point in this section as the values roughly correspond.

Second, ignoring the labelling errors, Truscott’s choice of timeframe is problematic. Truscott uses the proportion of reported sexual assaults from 2007 *through* 2014 (47) but then correlates those data with averaged religious attendance values for the year 2007 *and* 2014. In

<sup>17</sup> Note again that he simply ignored, missed, or omitted the large volume of literature demonstrating that religiosity positively predicts acceptance of rape myths.

<sup>18</sup> To clarify, we believe this is actually better than him focusing on completed rapes only.

<sup>19</sup> <https://www.pewresearch.org/religious-landscape-study/database/region>

other words, he uses data from two different time periods as his analytic approach. Also, why the analytic period is switched from 2013-2020<sup>20</sup> to 2007-2014 is not addressed in his paper, it is not foreshadowed, and it is not necessary with respect to data access<sup>21</sup>. Importantly, as can be seen in our Figure 1, the relationship between rape and religious disaffiliation was *negative* in the timeframe Truscott focuses on in Table 3. Truscott's change of analytic period is jarring as it does not seem to connect with the rest of his paper, nor does it add any additional context.

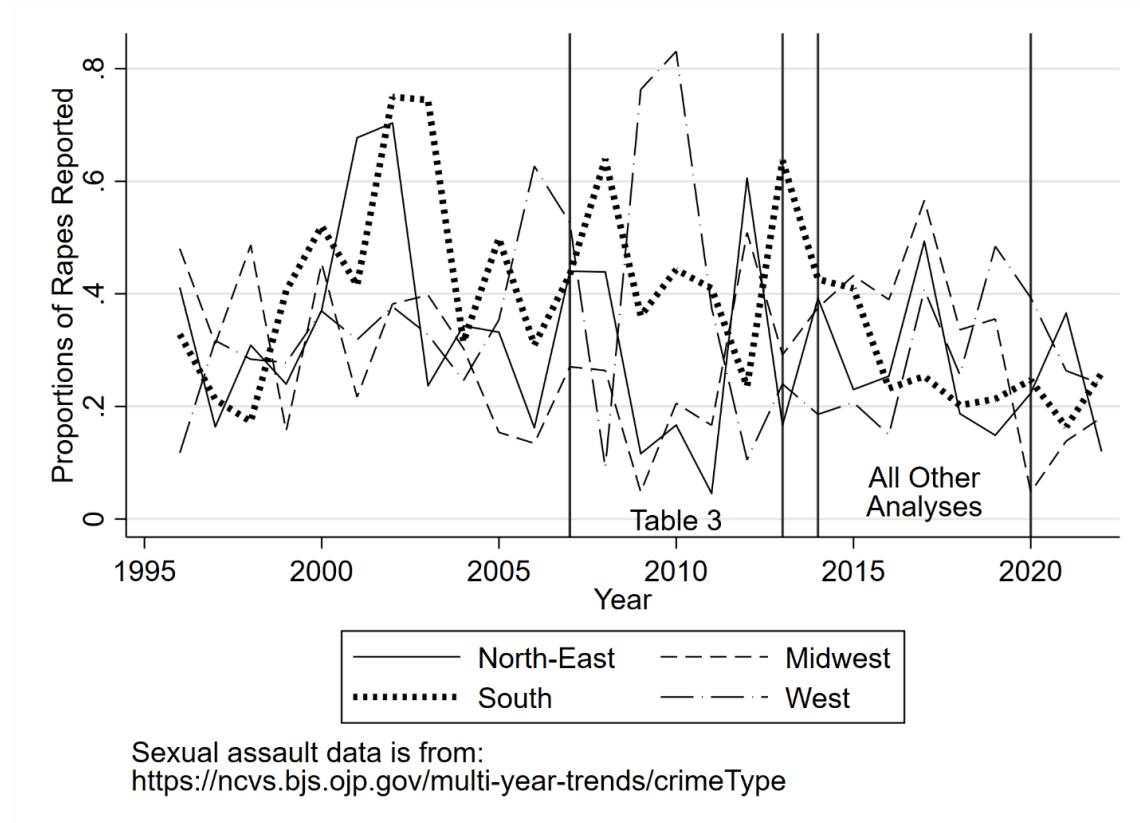
Third, Truscott's thesis addressing religion and rape reporting is not bore out when looking at the data over a longer period. As a primer, Truscott wanted to make the point that because the South had the highest level of religious attendance and because the South had the highest level of rape reporting, this "disproved" the idea of religion being connected with suppressing rape complaints, and "these results fail to support the claim that the culture of more religious parts of the USA causes a suppression of rape reports" (47). As an aside, as far as we can tell the South consistently has the highest degree of religiousness out of the four census regions<sup>22</sup>. However, as can be seen in Figure 6, the South's reporting of rape is only sporadically the highest, and declined from 2014 to 2020, despite having the highest degree of religiousness in that time period. Even *if* we were to accept Truscott's analysis and even *if* we were to accept Truscott's rationale, the data source he uses impeaches his conclusion.

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<sup>20</sup> Truscott's analytical period starts at 2013 or 2014 depending on the graph.

<sup>21</sup> The General Social Survey releases religious attendance data in 2-year increments and is publicly available.

<sup>22</sup> There is not a single data source on this, but based on the data from the bi-annual General Social Survey and various news releases it seems as though the South consistently reports the highest rate of affiliation, attendance, religiosity, etc.

**Figure 6:** Rape reporting by census region from 1996 to 2022.

Finally, there are a miscellany of other issues, any of which allow for the dismissal of Truscott's approach. The validity of his approach presupposes that perceptions of rape do not vary as a function of religiosity, which we know is untrue (Barnett et al. 2018; Ensz and Jankowski 2020; Freymeyer 1997; Navarro and Tewksbury 2017; Owens et al. 2021; Prina and Schatz-Stevens 2020; Rimmer and Birch 2019). Truscott's approach treats each of the four census regions as culturally homogeneous, which means that Texas and Delaware are considered equivalent because they are in the South. Finally, even if Truscott's analysis demonstrated all that he purported that it did, it is still *irrelevant* to demonstrating that the nonreligious are driving either the rate of rape or the rate of suicide.

## Problematic Conclusions

Given our criticisms of Truscott's premises and analyses, it is probably unsurprising that we also have concerns regarding his conclusions. While we have significant criticisms of Truscott's work, we did agree on several points in his conclusion. 1) Truscott argues that rape and suicide rates are statistically related. We agree there may be a non-zero correlation between rape and suicide, although we draw no further conclusions from this. 2) Truscott notes



rape and suicide and predominantly male-driven. We again agree with this although we draw no further conclusions. 3) We agree with Truscott that better standards of rape-reporting should be employed. With those agreements aside, in this section we will discuss why Truscott's dismissal of reverse-causality is underwhelming, why his mediator is implausible and unwarranted, and why his conclusions do not match his actual findings.

### ***Strawman of Reverse Causality***

Truscott recognizes that it is technically possible that rape/suicide leads to disaffiliation, but explains why his interpretation (i.e., disaffiliation causing rape/suicide) is more plausible. We have recreated his bulleted list for the specific purpose of allowing readers to understand why each point is erroneous, irrelevant, or fallacious (50).

- “NCVS rape reporting in the most religious census region, the South, was the highest rate (47.6%), and that of the least religious region, the Northeast, was the lowest (29.1%).”
  - Truscott used data from two different periods which grants no obvious validity to his research question. Furthermore, this pattern is inconsistent (see Figure 6), emerges only sporadically, and unwarrantedly assumes cultural homogeneity across regions. Finally, this point presupposes that religion and attitudes towards rape are unrelated, which is demonstrably false.
- “There was a large correlation between the general population rape rate and the suicide rate in the 50 states over this period, and it is reasonable to assume that one set of mainly male-initiated occurrences (suicides) would vary alongside another male-initiated occurrence (rape attacks) as opposed to assuming that the rapes were merely an artifact of reporting patterns.”
  - While we acknowledge that rape and suicide may correlate, this does not demonstrate a causal relationship between the two and certainly does not implicate the nonreligious. Furthermore, our similar analysis of homicide rate—a stronger test of Self-Control Theory—yields an opposite pattern of results when compared with the proportion of Nones. At best, Truscott's point is irrelevant, at worst it is misleading.
- “Reported rape counts and rape counts estimated from the NCVS are strongly correlated with each other.”
  - We will acknowledge that one metric of rape correlates with a different metric of rape. However, this does not demonstrate that Nones drive rape rates.

- “The preponderance of the research literature points to a negative correlation between religiosity and crime.”
  - This is potentially true for some forms of crime but is also irrelevant. Demonstrating that the nonreligious are more likely to drink underage is a far cry from demonstrating the nonreligious are more likely to commit violent crime. Importantly, in his cited literature, Truscott offered no evidence that Nones were more likely to commit suicide or rape. As could be seen in several of the Figures we produced, nonreligion was negatively related to homicide in the USA and atheism rates did not predict homicide rates across countries. Additionally, Nordic countries have a high degree of nonreligion and a comparatively low rate of crime (Lehti et al. 2019).
- “The preponderance of the research literature indicates a positive correlation between religiosity and self-control.”
  - This is technically true, but irrelevant. Truscott did not assess self-control; he assessed suicide and rape which he argued were proxies of self-control. Furthermore, Truscott could not demonstrate that the nonreligious were more likely to be responsible for rape or suicide, and he did not provide any data suggesting Nones had lowered self-control in his analytic window.
- “The sole study on rape acknowledgement by victims failed to show an association between religiosity and rape non-acknowledgement.”
  - This is technically true, but misleading. Truscott is interpreting a null finding from one study (using university students) as evidence that the effect does not exist for the general population.
- “The sole study on religiosity and rape myth acceptance failed to show a significant association.”
  - This is demonstrably false, or extremely misleading. While Navaro and Tewksbury (2018)—the sole study referenced—did report null results, Truscott missed over a dozen studies that explored rape myth acceptance and religiosity. Most demonstrated a significant, positive relationship between rape myth acceptance and religiosity. This is critical as individuals who accept rape myths are more likely to perpetrate rapes (Trottier, Benbouriche, and Bonneville 2021), and these literatures alone are enough to robustly support the reverse causality that Truscott dismisses.
- “The sole study touching on sexual violence on religious campuses supported an inverse correlation between religiosity and sexual violence.”

- We think this is a reference to Vanderwoerd and Cheng (2017), but we were unsure. Assuming that this was the case, it is irrelevant given that rape myth acceptance is positively related to religiosity. Given that all respondents in the referenced study attended religious schools, it is reasonable to assume that this would translate into a ‘higher than average’ acceptance of rape myths, which would depress the amount of reporting. At best this point is irrelevant.
- “Religion is absent from the research literature on why rape is not reported.”
  - This is demonstrably false, or extremely misleading. Sheldon and Parent stated that, “most clergy in our sample blame the victim and fall prey to rape myths... 75% of clergy in this study reported experience counseling sexual assault victims” (2002:250); Barnett et al. stated that, “If we use the church as a platform to foster a positive environment for victims of rape... women as a result would then be encouraged to report sexual assault when it occurs and, thus, more likely to do so” (2018:1231). And while not in academic articles, there are dozens of news stories noting religious institutions that were active in suppressing, downplaying, or covering-up rape allegations.

While Truscott superficially engages with the possibility of reverse-causality, absent from his considerations are these critical points, which makes his buttressing efforts unsuccessful.

### ***An Implausible Mediator***

Truscott explains the correlations between the growing proportion of Nones and the rise in rape and suicide as potentially being the product of mind-altering substances. Specifically, “A plausible mediator between religious non-affiliation and rape is increased drug and alcohol use.” It is important to note that Truscott is arguing an additional proxy is responsible for the observed pattern of data. Truscott states that “As noted by McCauley et al. (2010), binge-drinking, marijuana, and illicit drugs were all associated with increased probabilities of rape, in which case these victimless crimes succeeded in finding victims. To put it another way, some non-religious men made a short moral step into substance use and then, in a diminished state of self-control, made a much larger one into criminality” (49). Truscott’s wording implies that people who partake in drugs and alcohol are more likely to commit sexual violence. Problematically, McCauley et al. (2010) did not examine whether *rapists* consumed alcohol and drugs; they examined whether *rape survivors* consumed alcohol and drugs. McCauley et al. found that the probability of rape increased if the survivor was incapacitated in some fashion. Importantly, McCauley et al. did not examine religion as a predictor, yet Truscott nevertheless concludes that it was the nonreligious men consuming drugs and alcohol who then perpetrated rape. This extrapolation is incredible given that there were no data connecting Nones and rape

in Truscott's study, and there is ample evidence that [nonreligious] groups are more likely to reject rape myths.

### ***The Findings That Weren't***

Given how Truscott described his findings in subsequent media interviews, we would like to reiterate what Truscott did and did not find. Truscott did not find that the nonreligious committed more rapes. Truscott did not find that the nonreligious committed suicide at a greater rate. Truscott did not find that nonreligion drives up rates of rape. Truscott did not find that nonreligion drives up rates of suicide. Truscott did not find that nonreligion rates explain >80% of the variability in rape. Truscott did not find that nonreligion rates explain >90% of the variability in suicide. Truscott did not find that religious regions were more or less likely to report rape than nonreligious regions. With that list of qualifiers aside, Truscott found that, "unadjusted for important covariates, the state-level estimate of the nonreligious positively correlated with rape and suicide estimates, for *some* years." Given the limitations and caveats that need to be explicitly recognized, it is difficult to evaluate Truscott's findings because they have so little substance.

### **Conclusion**

Research is used extensively in the 21<sup>st</sup> century to inform public discussion and catalyze change. Given the increasing polarization around religion and belief, those with voice and authority in the social sciences have increased responsibility to be cautious, measured, and accurate in their analyses and reporting. While we acknowledge that all research is flawed in some way, shape, or form, it was disheartening to read Truscott's work given its serious flaws and its extraordinarily overstated conclusions. While Truscott's research question was certainly admirable, his preferred approach to addressing it was not. When the broader literature in this field is examined, and when the data are examined in a longer time frame, a new conclusion becomes clear: Truscott's work should be rejected.

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