BRIEFING THE SUPREME COURT: PROMOTING SCIENCE OR MYTH?

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The Supreme Court will soon decide if North Carolina's ban on the use of social networking websites by registered sex offenders is constitutional. The case is *Packingham v. North Carolina* and oral arguments were heard in February 2017. The principal legal issue in the case is whether the ban violates the First Amendment's right to freedom of speech.

Yet another issue has arisen in the briefing and oral arguments before the Supreme Court. The litigants and certain amici curiae engage in some debate about whether such a restriction is necessary in the first place. That is, various parties argue about whether the ban serves to protect the public from what North Carolina and the representatives of thirteen other states in a collective amicus brief contend are high risk sex offenders who commonly use the internet to locate children for purposes of sexual exploitation.² In opposition,

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State v. Packingham, 777 S.E. 2d 738 (N.C. 2015), cert. granted, 137 S. Ct. 368 (2016).
Brief of Respondent, Packingham v. North Carolina at 26-27, No. 15-1194 (U.S. Jan. 17, 2017), 2017 U.S. S. Ct. Briefs LEXIS 170 [hereinafter Brief of Respondent], available at http://www.scotusblog.com/wp-content/uploads/2017/01/15-1194-respondent-brief.pdf (citing N.C. Gen. State. § 14-208.5); Brief for State of Louisiana and Twelve Other States as Amici Curiae at 1, Packingham v. North Carolina, No. 15-1194 (U.S. Jan. 23, 2017) [hereinafter States' Amicus Brief], available at http://www.scotusblog.com/wp-content/uploads/2017/01/15-1194_amicus_resp_louisiana.pdf.

the individual petitioner Packingham's submissions and the amicus brief by a group of sex offender treatment professionals refute such allegations.³

This debate is certainly important because it goes to the heart of the foundational basis of North Carolina's justification for the ban. The Supreme Court has previously approved civil restrictions on sex offenders, such as public registries and residency restrictions, based on its belief that their recidivism risk is "frightening and high." Yet some experts point out that the scientific evidence is to the contrary. News reporters have noticed, running stories about the *Packingham* case and specifically challenging the Supreme Court's previous rulings upholding sex offender restrictions. The headline in the *New York Times* reads "Did the Supreme Court Base a Ruling on a Myth?" Similarly, *Slate Magazine*'s coverage leads with "The Supreme Court's Sex-Offender Jurisprudence is Based on a Lie."

³ Petition for Writ of Certiorari at 40 n.6, Packingham v. North Carolina, No. 15-1194 (U.S. Mar. 21, 2016), 2016 U.S. S. Ct. Briefs LEXIS 1377 [hereinafter *Petition*], *available at* http://www.scotusblog.com/wp-content/uploads/2016/04/Petition-for-Writ-Packingham-v-State-of-North-Carolina.pdf; Brief for Association the Treatment of Sexual Abusers et al. at 16-21, Packingham v. North Carolina, No. 15-1194 (U.S. Dec. 22, 2016), 2016 U.S. S. Ct. Briefs 4795 [hereinafter *ATSA Brief*], *available at* http://www.scotusblog.com/wp-content/uploads/2016/12/15-1194 amicus-petitioner-ATSA.pdf.

⁴ McKune v. Lyle, 536 U.S. 24, 34 (2002). The Supreme Court's support for this assertion derives from an article in the trade magazine *Psychology Today*, in which the authors claimed the recidivism rate was up to eighty percent. Robert E. Freeman-Longo & R. Wall, *Changing a Lifetime of Sexual Crime*, PSYCHOL. TODAY, Mar. 1986, at 58. The lead author has since admitted the eighty percent estimate may once have been valid but now repudiates it as far too high a figure. Joshua Vaughn, *Closer Look: Finding Statistics to Fit a Narrative*, The SENTINEL, Mar. 25, 2016, http://cumberlink.com/news/local/closer_look/closer-look-finding-statistics-to-fit-anarrative/article_7c4cf648-0999-5efc-ae6a-26f4b7b529c2.html. Said author likewise argues that sex offender policies built upon such a false façade are not supported by scientific evidence and are dysfunctional. *Id*.

⁵ See generally Melissa Hamilton, Constitutional Law and the Role of Scientific Evidence: The Transformative Potential of Doe v. Snyder, 58 B.C. L. REV. E. SUPP. 34 (2017), http://bclawreview.org/files/2017/02/05_hamilton.pdf; Ira Mark Ellman & Tara Ellman, "Frightening and High": The Supreme Court's Crucial Mistake about Sex Crime Statistics, 30 CONST. COMMENTARY 495 (2015).

⁶ E.g., Radley Balko, *The Big Lie about Sex Offenders*, WASH. POST, March 9, 2017, https://www.washingtonpost.com/news/the-watch/wp/2017/03/09/the-big-lie-about-sex-offenders/?utm term=.ddb7fd592b34.

⁷ Adam Liptak, *Did the Supreme Court Base a Ruling on a Myth?*, N.Y. TIMES, March 6, 2017, https://www.nytimes.com/2017/03/06/us/politics/supreme-court-repeat-sex-offenders.html?hp&action=click&pgtype=Homepage&clickSource=story-heading&module=second-column-region®ion=top-news&WT.nav=top-news& r=2.

⁸ David Feige, *The Supreme Court's Sex-Offender Jurisprudence is Based on a Lie*, SLATE (March 7, 2017, 11:47 AM), http://www.slate.com/articles/news_and_politics/jurisprudence/2017/03/sex_offender_bans_are_based_on_bad_science.html.

The arguments concerning the government's purported need for a social networking ban refer to various statistical studies of sex offenders. This Essay contends that the case materials in *Packingham v. North Carolina* in support of the ban contain significant misunderstandings in conceptualizing and conveying the scientific evidence about the dangerousness of sex offenders. Such a conclusion is particularly distressing as these errors are contained in briefs and oral arguments before the Supreme Court of the United States in an important constitutional case. If the justices rely upon the version of the scientific evidence offered by the states in deciding *Packingham*, they will continue to be misled about the risks involved. This Essay is meant to address why the studies that North Carolina and its amici offer are more akin to junk science than valid representations of the empirical evidence as applicable to the group of sex offenders to whom the ban is targeted.

This Essay proceeds as follows. It first summarizes the background to *Packingham*. The next three Sections review the main arguments that North Carolina and the thirteen states as friends of the court make concerning the risk of sex offenders using social media to exploit minors. Alongside are analyses of the validity of the scientific evidence they cite.

I. THE PACKINGHAM CASE

The North Carolina legislature passed the Protect Children from Sexual Predators Act in 2008. The law bans the use of commercial social networking websites ("SNSs") by registered sex offenders. Violating the ban constitutes a felony. ¹⁰

Lester Gerard Packingham ("Petitioner"), was convicted of violating the statute for creating a Facebook profile.¹¹ He challenged his conviction on First Amendment grounds. Petitioner won in the state appellate court, which ruled that the statute is vague and arbitrarily burdens registered sex offenders' free speech rights.¹² The North Carolina Supreme Court reversed. In a non-unanimous ruling, a majority found the statute is neither vague nor unduly infringes upon First Amendment rights.¹³ In addition, the majority determined that the law is appropriately fitting "the government's interest in protecting children from registered sex offenders who are lurking on social networking Web sites and gleaning information on potential targets."¹⁴

Packingham petitioned for a writ of certiorari. ¹⁵ The United States Supreme Court granted the writ and held oral arguments on February 27,

¹¹ State v. Packingham, 748 S.E.2d 146, 149 (N.C. Ct. App. 2013).

⁹ N.C. Gen. Stat. § 14-202.5.

¹⁰ Id

¹² Id. at 154

¹³ State v. Packingham, 777 S.E.2d 738 (N.C. 2015).

¹⁴ *Id*. at 749.

¹⁵ Petition, supra note 3.

2017.

In its briefing and in oral arguments before the Supreme Court, North Carolina makes three claims about the risk of sex offenders. The State argues that these claims are supported by social science and are in keeping with common sense. The first is a broad allegation that registered sex offenders as a group have a "notoriously high recidivism rate." The second claim is that sex offenders typically are crossover offenders, meaning individuals who have sexually offended with adult victims also sexually victimize children. The State relies upon evidence of crossover offending to justify the ban's application to all registered sex offenders, not just those who have previously victimized minors. North Carolina's third assertion concerning risk is that registered sex offenders "commonly" use SNSs to sexually exploit children. As a result, North Carolina contends it needs to restrict registered offenders' use of SNSs to proactively prevent such exploitation. The next Sections review each claim.

II. RECIDIVISM RISK

The State of North Carolina asserts that registered sex offenders have a "notoriously" high rate of sexual recidivism. The only empirical support North Carolina provides is a statistic from a Department of Justice document published in 2003. This report, aptly titled "Recidivism of Sex Offenders Released from Prison in 1994," contains the findings of a study tracking the rearrests of almost 10,000 sex offenders released from fifteen state prisons in 1994 (the "DOJ Recidivism Study"). The study collected a fairly representative sample for the United States as it consisted of two-thirds of all male sex prisoners released in the country in that year.

North Carolina points to the DOJ Recidivism Study's finding that the sex crime rearrest rate for convicted sex offenders was four times higher than for non-sex offenders.²⁴ The multiple of four that North Carolina highlights is

¹⁶ Brief of Respondent, supra note 2, at 26-27.

¹⁷ *Id*. at 61-62.

¹⁸ *Id*. at 51.

¹⁹ *Id.* at 54.

²⁰ *Id.* at 26-27, 57.

²¹ Brief of Respondent, supra note 2, at 57 (citing Dominique A. Simons, Sex Offender Typologies, in SEX OFFENDER MANAGEMENT AND ASSESSMENT AND PLANNING INITIATIVE 55, 61-62 (Chris Lobanov-Rostovsky et al. eds., 2014) [hereinafter Smart Report], https://smart.gov/SOMAPI/pdfs/SOMAPI_Full%20Report.pdf).

²² Patrick A. Langan et al., U.S. Dept. of Just., Recidivism of Sex Offenders Released from Prison in 1994, at 24 (2003) [hereinafter *DOJ Recidivism Study*], https://www.bjs.gov/content/pub/press/rsorp94pr.cfm.

²³ *Id*. at 1.

²⁴ Brief of Respondent, supra note 2, at 57 (citing DOJ Recidivism Study, supra note 22, at 61-62). The respondent's brief pinpoint cites the DOJ Recidivism Study at pages 61-62,

correct, but the State's lawyers are also hiding the ball. The given result is not directly applicable to *registered* sex offenders as the DOJ Recidivism Study did not differentiate registered from non-registered. Further, the DOJ Recidivism Study indicated that 5.3% of released sex offenders were arrested on a new sex crime.²⁵ Then, as a sign that recidivism studies that rely upon arrest data may overreach in counting failures, the reconviction rate of sex offenders for new sex crimes was 3.5%.²⁶ This means that one-third of those arrested for new sex crimes were not convicted of those charges.²⁷ Moreover, neither statistic (rate of arrests or convictions) supports any type of "notoriously high" risk designation for sex offenders that North Carolina trumpets.

The Petitioner (Packingham) also cites the DOJ Recidivism Study, but to highlight additional results. He finds it confirms that "empirical evidence refutes widely-held assumptions about dangers posed by registrants." In this respect, Packingham promotes two findings from the DOJ Recidivism Study: (1) the general recidivism rate (i.e., reoffending with any type of crime) for convicted sexual offenders was significantly lower than those convicted of other types of crimes, and (2) offenders previously incarcerated for nonsexual crimes accounted for six times more new sex crime arrests than those whose prior convictions were for sex crimes. ²⁹ The implication from these results is that if the government truly hopes to target reductions in general recidivism and in sexual recidivism specifically, then it ought to focus more on non-sex offenders.

Perhaps realizing that the DOJ Recidivism Study is not very supportive of a "notoriously high" recidivism rate for sex offenders, North Carolina resorts to reflecting that the state's own legislature and the United States Supreme Court have previously subscribed to the notion that sex offenders are highly likely to recidivate.³⁰ The lawyer representing the State pointedly reminded the justices at oral arguments that the high court had in a prior case recognized that sex offenders are highly likely to repeat their crimes.³¹ North Carolina alternatively couches its conclusion on simple "common sense."³² Yet common sense is not science, and common sense can be factually

which is a mistake. The correct reference would be to page 93.

²⁵ DOJ Recidivism Study, supra note 22, at 1.

²⁶ *Id*.

²⁷ *Id*. at 2.

²⁸ Petition, supra note 3, at 40 n.6.

²⁹ Petition, supra note 3, at 40 n.6 (citing DOJ Recidivism Study, supra note 22, at 24).

³⁰ Brief of Respondent, supra note 2, at 56.

³¹ Transcript of Oral Argument at 35, Packingham v. United States, No. 115-1194 (Feb. 27, 2017), https://www.supremecourt.gov/oral_arguments/argument_transcripts/2016/15-1194 0861.pdf.

 $^{3\}overline{2}$ Brief of Respondent, supra note 2, at 57.

inaccurate.

At least the brief of the thirteen states acting as amici curiae (the "States' Amicus Brief") attempts to bolster their own claim that a high percentage of sex offenders are recidivists by citing three additional scientific studies. However, none of the underlying studies has any strong relevance to the risk of registered sex offenders as none of them distinguished registered from nonregistered. Further, none of them are generalizable to a population of convicted sex offenders in North Carolina for the reasons that are next discussed.

The States' Amicus Brief declares that "one study showed that, over a twenty-five period, fifty-two percent of persistent child molesters were rearrested for a new sex offense and thirty-nine percent of rapists were rearrested for a new sex offenses." However, the underlying study is of limited value here. The study is dated, using a sample of sex offenders released between 1959 and 1985. The recidivism rates quoted by the States' Amicus Brief are not the observed rates of recidivism, but merely *projected* rates using a technique called survival analysis. As a result, one of the original study's authors has warned that the estimated rates should not be cited as actual rates. More importantly, the study is not generalizable to any degree as the study sample was entirely composed of men prosecuted as "sexually dangerous persons" and thereafter civilly committed to a secure, inpatient mental health hospital. Hence, the sample is only representative of an extremely select group of those presenting with the highest risk, plus are distinguishable as having been diagnosed with severe mental illness.

The States' Amicus Brief touts two other studies in their efforts to promote the idea of repeat offending with respect to child molesters. It maintains that "a five-year follow-up study found that, of persons who had committed child molestation, fifty-three percent of same-sex offenders and forty-three percent of opposite sex offenders had already been convicted of

³³ States' Amicus Brief, supra note 2, at 10-11 (citing Tim Bynum et al., Center for Sex Management, Recidivism of Sex Offenders http://csom.org/pubs/recidsexof.html). In turn the Bynum et al. document cites Robert A. Prentky et al. Recidivism Rates Among Child Molesters and Rapists: A Methodological Analysis. LAW & HUMAN **BEHAVIOR** 635 (1997),https://www.researchgate.net/profile/Robert Prentky/publication/13812641 Recidivism ra tes among child molesters and rapists A methodological analysis/links/53da392e0cf2e 38c63366343/Recidivism-rates-among-child-molesters-and-rapists-A-methodologicalanalysis.pdf.

³⁴ Prentky et al., *supra* note 33, at 637, 640.

³⁵ *Id.* at 642.

³⁶ Jill Levenson, Sex Offender Recidivism, Risk Assessment, and the Adam Walsh Act, 10 SEX OFFENDER L. REP. (2009), available at http://www.leg.state.vt.us/WorkGroups/sexoffenders/AWA SORNsummary.pdf.

³⁷ Prentky et al., *supra* note 33, at 637

previous sex offenses."³⁸ The underlying study poses similar problems in its ability to represent the recidivism of a general population of sex offenders. The sample were all civilly committed sex offenders with diagnosed severe mental disorders who were released from hospitalization in 1973.³⁹

Then the States' Amicus Brief cites a third study, stating that it "showed that thirty-one percent of extra-familial child molesters were reconvicted of a second sexual offense within six years." Again, empirical issues plague its relevance to this case. The underlying study was conducted on patients released from a maximum security psychiatric institution between 1972 and 1983. This study is also not on point for another reason: the site of the study was in Canada. In empirical terms, the results of the three studies the States' Amicus Brief cites here are biased, with obvious validity concerns being represented as relevant to the risk of a heterogeneous group of registered sex offenders in North Carolina.

In contrast, the amicus brief on behalf of the Association for the Treatment of Sexual Abusers (and other groups) provide evidence of sexual recidivism studies from more appropriate samples. This brief cites results from studies of released sex offenders in seven different states in America, showing sexual recidivism rates in the low single digits (most around three percent), 42 which is relatively consistent with the DOJ Recidivism Study results.

III. CROSSOVER OFFENDING RISK

The next scientific debate concerns crossover offending. North Carolina argues that its SNS ban is not overbroad in applying to all registered sex offenders. The state contends that "[r]esearch shows a high crossover rate for sexual offenders," meaning that offenders with adult victims frequently molest children as well. An North Carolina's brief asserts that a "majority of studies find[] 'rates in the range of 50 to 60 percent' for crossover offending, citing a publication produced by the Department of Justice's Office of Sex Offender Sentencing, Monitoring, Apprehending, Registering, and Tracking (with the office having the acronym "SMART" thus herein the "Smart

³⁸ States' Amicus Brief, supra note 2, at 10 (citing Bynum et al., supra note 33, at 8-9). In turn, The Bynum et al., report links these results to the report of Vicki Henlie Sturgeon & John Taylor, Report of a Five-Year Follow-Up Study of Mentally Disordered Sex Offenders Released from Atascadero State Hospital in 1973, 4 CRIM. JUST. J. 31 (1980).

³⁹ Sturgeon & Taylor, *supra* note 38, at 31.

⁴⁰ States' Amicus Brief, supra note 2, at 10 (citing Bynum et al., at 8-9). In turn, the Bynum et al., report links these results to Marnie E. Rice et al., Sexual Recidivism Among Child Molesters Released From A Maximum Security Institution, 59 J. CONSULTING & CLINICAL PSYCHOL. 381 (1991).

⁴¹ Rice et al., supra note 40, at 381.

⁴² ATSA Amicus Brief, supra note 3, at 17.

⁴³ Brief of Respondent, supra note 2, at 61.

Report"). 44 This statement is misleading in that a "majority of studies" does not refer generally to sexual recidivism studies. The Smart Report's reference was actually to studies of only male offenders, that specifically focused on crossover offending, and used individual self-reports as the methodology (as opposed to other measurements such as official statistics in the form of arrests or convictions). 45

For the proposition of the fifty to sixty percent marker, the Smart Report cites five self-report studies. At the outset, it is evident that the description of the five studies representing the "majority" of self-report studies on sexual recidivism is a gross overstatement; the literature contains many more. ⁴⁶ In any event, the next part analyzes the validity and reliability of those five studies in terms of whether they provide sufficient evidence for the State's claim on the prevalence of crossover offending.

A. Assessing the Evidence on Crossover Offending

An important scientific problem is that none of the five studies the Smart Report cites as evidence of a high level of crossover offending are representative samples which are suitable for generalizing to a U.S.-based population of those convicted of sex offenses of all varieties. For example, each study relied upon convenience samples of individuals who were voluntarily or involuntarily in treatment programs for sexual deviance. From a scientific perspective, this type of nonprobability sampling means there is a high likelihood of selection bias and sampling error.

There are additional grounds for regarding the five studies as not generalizable outside their own contexts. Four of the studies were based simply on one or two sites,⁴⁷ thus severely limiting inferences to other

⁴⁴ *Id.* at 61 (citing Dominique A. Simons, *Sex Offender Typologies, in Smart Report, supra* note 21, 55, 61-62).

⁴⁵ Smart Report, supra note 21, at 61.

⁴⁶ See generally Holly Kleban et al., An Exploration of Crossover Sexual Offending, 25 SEXUAL ABUSE 427 (2012) (collecting studies), available at https://www.researchgate.net/profile/Elizabeth_Jeglic/publication/233396330_An_Exploration_of_Crossover_Sexual_Offending/links/55252f170cf2b123c517976f/An-Exploration-of-Crossover-Sexual-Offending.pdf.

⁴⁷ E.g., Daniel Wilcox et al., Sexual History Disclosure Using the Polygraph in a Sample of British Sex Offenders in Treatment, 34 POLYGRAPH 171, 173 (2005) (individuals in a sex offending treatment program at a fixed site in Britain), available at https://www.researchgate.net/profile/Anthony_Beech/publication/241685928_Sexual_history_disclosure_using_the_polygraph_in_a_sample_of_British_sex_offenders_in_treatment/links/54a2e7380cf267bdb9042bb3/Sexual-history-disclosure-using-the-polygraph-in-a-sample-of-British-sex-offenders-in-treatment; Peggy Heil et al., Crossover Sexual Offenses, 15 Sexual Abuse 221, 224 (2003) (inmates and parolees in a sex offender treatment program in Colorado); Michael A. O'Connell, Using Polygraph Testing to Assess Deviant Sexual History of Sex Offenders 38 (June 12, 1997) (unpublished Ph.D dissertation, University of Washington) (individuals seeking treatment at a clinic in Washington),

populations. Two of the studies included individuals in their samples without officially recognized sex crimes, ⁴⁸ rendering those samples inapposite to a population of convicted sex offenders as there are risk relevant differences between them. For the foregoing reasons, researchers in at least three of the five studies conceded in their papers that their research subjects did not constitute representative samples. ⁴⁹

As well, the studies are bedeviled by questionable methodological choices that render them inherently unreliable. Herein, I will discuss just a few of the troubling issues.

1. Imprecision in Defining Sexual Offending

First, each of the five studies counted as offenses various behaviors that do not necessarily constitute crimes in the first instance, and do not necessarily involve human contact. For instance, one study (English et al.) counted as offenses with victims such things as obscene phone calls, voyeurism, stalking, and internet pornography viewing.⁵⁰ Another study (O'Connell) counted "sexually deviant acts," which were defined to include group sex, prostitution, peeping, and any sex with a male.⁵¹ Then a third (Wilcox et al.) recorded as offenses such acts as obscene phone calls, prostitution, calls to sex hotlines, adultery, threesomes, nude bars, and homosexual behavior.⁵² This means that the rates of crossover offending with adults and children as victims are likely exaggerated due to counting the foregoing types of behaviors along with forcible rapes and child molestation. The inclusion of behaviors that may be minor and fail to rise to the level of crimes is a face validity problem, meaning that the definition applied in the studies does not truly reflect the concept of criminal offending.⁵³

available at https://www.researchgate.net/publication/33518402_Using_polygraph_testing_to_assess_d eviant_sexual_history_of_sex_offenders.

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⁴⁸ Gene G. Abel & Candace Osborn, *The Paraphilias: The Extent and Nature of Sexually Deviant and Criminal Behavior*, 15 PSYCHIATRIC CLINICS N. AM. 675 (1992); O'Connell, *supra* note 47. at 38-39.

⁴⁹ Gene G. Abel et al., *Self-Reported Sex Crimes of Nonincarcerated Paraphiliacs*, 2 J. INTERPERSONAL VIOLENCE 3, 20-21 (1987) (discussing same sample and results as in Abel & Osborn, *supra* note 48); Wilcox et al., *supra* note 47, at 177; O'Connell, *supra* note 47, at 77

⁵⁰ Kim English et al., The Value of Polygraph Testing in Sex Offender Management App. D (2004), www.ncjrs.gov/pdffiles1/nij/grants/199673.pdf.

⁵¹ O'Connell, *supra* note 47, at 46-47.

⁵² Wilcox et al., *supra* note 47, at 182-83 App. I.

⁵³ Josine Junger-Tas & Ineke Haen Marshall, *The Self-Report Methodology in Crime Research*, 25 CRIME & JUST. 291, 320 (1999).

2. Childhood Sexual Activity

Second, to the extent that the idea of crossover offending is suggestive of adults who offend against victims both above and below the age of eighteen, the studies provide weak support for such a vision. Researchers in each study tabulated sexual acts over the subjects' lives; that is they obtained self-reports of lifetime sexual histories. Thus, offending against minors included acts when the subjects themselves were minors. As an example, English et al.'s study indicated that three-fourths of the sample recalled sexual offenses they committed when they were age thirteen or younger. It appears that at least some of the "offenses" against child victims may not have constituted crimes either. As further evidence of this, English et al.'s results also counted as child molestation any sexual behaviors with other minors that the subjects engaged in when they themselves were eight-years-old or younger. It is unlikely for children at such tender ages to be legally culpable of such a crime.

Nor do the researchers seem to distinguish perpetrator from victim when two minors engaged in sexual acts. Wilcox et al. counted sexual offenses individuals self-reported that occurred when they were as young as six years-of-age.⁵⁶ Another study defined child molestation based simply on age differences, including when both of them were minors.⁵⁷ In sum, it appears that the so-called crossover offending counts in these studies were not limited to conduct with children when the offenders were adults.

3. Reliability of Self-Reports

Third, all five studies relied upon self-reports by subjects during interviews with treatment staff, and they are further subject to question because researchers failed to externally validate the self-reported victims and offenses. ⁵⁸ In empirical terms, this means they could not establish concurrent validity, which would entail testing whether the information gleaned from self-reports is consistent with other sources. ⁵⁹

The failure to validate is particularly troublesome here as the victim and offense counts reported in these studies yielded unrealistic numbers of victims and sexual offenses per interviewee. For example, Heil et al.'s report indicated that individual subjects recounted sexually offending against up to 215 different victims (on average reporting 18 victims) and up to 6,075

⁵⁴ English et al., *supra* note 50, at 40 tbl. 7.

⁵⁵ Id

⁵⁶ Wilcox et al., *supra* note 47, at 175.

⁵⁷ O'Connell, *supra* note 47, at 48.

⁵⁸ Theodore P. Cross & Leonard Saxe, *Polygraph Testing and Sexual Abuse: The Lure of the Magic Lasso*, 6 CHILD MALTREATMENT 195, 201 (2001).

⁵⁹ Junger-Tas & Marshall, *supra* note 53, at 322.

specific offenses (on average identifying 137 offenses). O'Connell's study of patients referred for sexual deviance assessments found that subjects admitted to an average of 290 specific instances of sexually deviant behavior through their youth and adulthood. In Wilcox et al.'s small sample of British probationers, subjects on average reported 82 contact sexual offenses (standard deviation of 188) plus 81 noncontact sexual behaviors (standard deviation of 218). The standard deviations in Wilcox et al. suggests that multiple subjects were somehow able to identify and recount literally hundreds of contact and noncontact sexual acts they had committed. These extreme numbers are suggestive that most of the behaviors were nonserious as experience with self-reports in criminological studies informs that they are ripe with overreporting when eliciting events that are nonserious or high frequency occurrences. S

Overall, it seems preposterous to assume that the examinees' recollections were sound enough and sufficiently reliable to enable them to recount specifics about so many events and persons. Coupled with these studies' tendencies to count sexual offenses perpetrated when the examinees were as young as six years, the high numbers of "admissions" seem implausible. To this point, Abel and Osborn's research found that adult offenders who reported having had a deviant sexual interest during childhood also admitted to committing an average of 380 sex offenses before reaching adulthood.⁶⁴

4. Controversies with Polygraph

A fourth issue is evident as researchers in four of the studies allegedly supporting the idea of a high crossover offense rate used polygraph testing intentionally to increase the number and scope of admissions.⁶⁵ North Carolina's brief does not mention this, but the Smart Report itself warns that using polygraph exams with sex offenders is a "controversial" practice, in part because of the "possibility of false admissions and an overstating of the number of victims."⁶⁶ Critics contend that the way polygraph exams for sex offenders are orchestrated, they enhance the likelihood that honest polygraph

⁶⁰ Heil et al., *supra* note 47, at 228 tbl. I.

⁶¹ O'Connell, *supra* note 47, at 48.

⁶² Wilcox et al., *supra* note 47, at 174.

⁶³ Junger-Tas & Marshall, *supra* note 53, at 322.

⁶⁴ Gene G. Abel & Joanne-L. Rouleau, *The Nature and Extent of Sexual Assault, in* HANDBOOK OF SEXUAL ASSAULT 9, 13 (W.L. Marshall et al. eds., 1990) (discussing same study and sample as in Abel & Osborn, *supra* note 48.

⁶⁵ Heil et al., *supra* note 47, at 226; English et al., *supra* note 50, at 31; Wilcox et al., *supra* note 47, at 172; O'Connell, *supra* note 47, at 35.

⁶⁶ Christopher Lobanov-Rostovsky, Sex Offender Management Strategies, in Smart Report, supra note 21, 144, 150-51.

takers will be judged untrue, while frequent liars will be judged as truthful.⁶⁷ Indeed, studies of polygraph exams of sex offenders have indicated false positive rates (innocent examinees judged as deceptive) are higher than false negative rates (lying examinees perceived as truthful).⁶⁸

Experts note several explanations for false positives in sex offender polygraph results. Innocent individuals who fear being wrongfully accused experience stronger physiological responses, which can read as deception.⁶⁹ It is also recognized that sexual history disclosure tests often include ambiguous questions, such that the individual's deceptive results may simply mean that he is having difficulty determining whether his behavior fits within the definition. ⁷⁰ For example, the Heil et al. study posed this question: "Have you physically forced or threatened anyone 15 or older into having sexual contact with you?"⁷¹ The fluidity of language and behaviors in human interaction is so variable that it might not be entirely clear to an examinee whether persuasive strategies count as force or threat, or whether a specific contact qualifies as sexual in nature. Thus, an examinee's confusion as to the question may influence a deceptive response. There is also a strong potential for confirmation bias in which the polygraph investigator's own judgment may be influenced by preconceived expectations about the true extent of the examinee's sexual deviance.⁷² An examiner may have internalized the presumption that most sex offenders are repeat offenders, which could influence the tone of the questions asked and the resulting judgements on the subject's veracity if he denies having additional victims or committing more offenses.⁷³

⁶⁷ Gershon Ben-Shakhar, *The Case Against the Use of Polygraph Examinations to Monitor Post-Conviction Sex Offenders*, 13 LEGAL & CRIMINOLOGICAL PSYCHOL. 191, 196 (2008), *available at* https://www.researchgate.net/profile/Gershon_Ben-Shakhar/publication/229526803_The_case_against_the_use_of_polygraph_examinations_t o_monitor_post-conviction_sex_offenders/links/0deec51f3606b64f2a000000/The-case-against-the-use-of-polygraph-examinations-to-monitor-post-conviction-sex-offenders.pdf.

⁶⁸ Ewout H. Meijer et al., Sex Offender Management using the Polygraph: A Critical Review, 31 Int'l J. L. & Psychiatry 423, 425 (2008), available at https://www.researchgate.net/profile/Bruno_Verschuere/publication/23255985_Sex_offend er_management_using_the_polygraph_A_critical_review/links/53f513ec0cf2fceacc6f1f05/Sex-offender-management-using-the-polygraph-A-critical-review.pdf (citing studies).

⁶⁹ *Id.* at 424

⁷⁰ Tim F. Branaman & Sheree Gallagher, *Polygraph Testing in Sex Offender Treatment: A Review of Limitations*, 23 AM. J. FORENSIC PSYCHOL. 45, 54 (2005).

⁷¹ Heil et al., *supra* note 47, at 226.

⁷² Ben-Shakhar, *supra* note 67, at 198.

⁷³ NATIONAL RESOURCE COUNCIL, THE POLYGRAPH AND LIE DETECTION 89-90 (2003), https://www.nap.edu/login.php?record_*Id*=10420&page=https%3A%2F%2Fwww.nap.edu%2Fdownload%2F10420.

5. False Confessions

Another issue to acknowledge is that false confessions are often elicited in the context of sex offender treatment. English et al. noted that sex offenders may exaggerate their sexual deviance in the treatment and polygraph process. O'Connell likewise conceded that the result of examinees in his study reporting on average about 300 sexually deviant behaviors may in part be explained as their "[w]anting to 'pass' the [polygraph] examination may have led them to over-estimate their deviant sexual histories, and the polygraph charts may not have picked up their exaggeration."

Incentives for progress in treatment may increase false admissions. The Heil et al. study compared polygraph-induced admissions between a group of prisoners and a group of parolees. The prisoners were rewarded for success in treatment with a transfer to a less secure facility and a reduction in sentence. The parolees did not receive an analogous reward. Thus, Heil et al.'s finding that the number of additional disclosures (whether true or not) following polygraphs for the sample of prisoners was significantly greater than the increased disclosures from the parolees who did not receive equivalent incentives may be evidence of this carrot-like effect of inducing potentially false admissions by the prisoners.

Additional reasons may explain the role of polygraphs in inducing exaggerations. A polygraph examiner familiar with post-conviction sex offender treatment programs observes that program officials routinely challenge the credibility of every examinee, regardless of the polygraph results.⁷⁸ He explains that as a result

[examinees] are faced with a limited range of options, which may include accepting arbitrary consequences for making no admissions, making false admissions, or developing their skill at making safe admissions to placate or manipulate the polygraph examiner and

⁷⁴ English et al., *supra* note 50, at 46.

⁷⁵ O'Connell, *supra* note 47, at 78. North Carolina's brief then cites the Smart Report for the finding that "64-66 percent of incest offenders report sexually assaulting children who they were not related to." *Brief of Respondent, supra* note 2, at 62 (citing Dominique A. Simons, *Sex Offender Typologies, in Smart Report, supra* note 21, 55, 61-62). Yet the three studies underlying the Smart Report's assertion here were among those cited for the assertion that 50 to 60 percent of sex offenders with adult victims have also abused children just discussed. *Brief of Respondent, supra* note 2, at 57. Thus, this assertion also lacks sufficient and appropriate empirical support for the same reasons.

⁷⁶ Heil et al., *supra* note 47, at 227.

⁷⁷ Id. at 228.

⁷⁸ Raymond Nelson, *Testing the Limits of Evidence Based Polygraph Practices*, 45 POLYGRAPH 74, 78 (2016), https://www.researchgate.net/profile/Raymond_Nelson/publication/299470504_Testing_th e_Limits_of_Evidence_Based_Polygraph_Practices/links/570391a208aedbac12706e8d/Testing-the-Limits-of-Evidence-Based-Polygraph-Practices.pdf.

referring agent into a sense of complacent satisfaction that they are extracting additional information by routinely questioning truthful examinees.⁷⁹

Sex offenders may likewise falsely confess because they believe it is expected that they had previously unknown victims. ⁸⁰ Thus, observers note that many "[sex] offenders might have fabricated stories after deceptive test outcomes, in order to satisfy examiners or to obscure the actual reason for failing the test." The National Resource Council, a research committee of the National Academy of Sciences, recognizes that false confessions are more common than people may think and that polygraph interrogations, particularly those involving false positive test results, are prone to generating erroneous admissions. ⁸²

For the foregoing reasons, North Carolina does not provide sufficient empirical evidence for its claim of a high rate of crossover offending against adults and children by sex offenders as a general rule.

B. Assessing the Risk of Registered Sex Offenders to Children

North Carolina next proclaims that "[r]egistered sex offenders are proportionately far more likely than members of the general public to sexually assault minors," emphasizing such statement in bold type and underlined. The State asserts that this higher risk for registered offenders regarding children is "supported by social science." Yet the statistical measures it provides under that heading offer no authority for the risk of *registered* sex offenders, as opposed to nonregistered sex offenders. Nor does the State present any evidence for the conclusion that *child* victims are at higher risk of victimization by known sex offenders, registered or not. Instead, the State simply claims that reported recidivism rates of sex offenders are underestimates because of the gross underreporting of sex crimes due to the victims' shame. Here, North Carolina points to the Smart Report's reference to a study finding that just five percent of rapes and child sexual assaults self-reported during treatment were reflected in official records. Sec.

⁷⁹ *Id*.

⁸⁰ Theodore P. Cross & Leonard Saxe, *Polygraph Testing and Sexual Abuse: The Lure of the Magic Lasso*, 6 CHILD MALTREATMENT 195, 201 (2001).

⁸¹ Meijer et al., supra note 68, at 426.

⁸² NATIONAL RESOURCE COUNCIL, *supra* note 73, at 56.

⁸³ Brief of Respondent, supra note 2, at 56.

⁸⁴ *Id*. at 57.

⁸⁵ Brief of Respondent, supra note 2, at 57 (citing Smart Report, supra note 21, at 61-62 and Nat'l Inst. of Just., Reporting of Sexual Violence Incidents (2010), https://www.nij.gov/topics/crime/rape-sexual-violence/Pages/rape-notification.aspx).

⁸⁶ Brief of Respondent, supra note 2, at 58 (citing Smart Report, supra note 21, at 91). In turn, the Smart Report cites as the basis for such statistic: D. Simons et al., Utilizing

Yet, the fact that self-reports of offenses do not equal official record counts does not in itself show that registered sex offenders are more likely to assault minors. The study underlying the five percent figure did not differentiate registered versus unregistered offenders. North Carolina does not cite any empirical research to substantiate its seeming presumption that underreporting is a greater problem when the perpetrators are previously identified sex offenders—as opposed to the general public. To the contrary, the same Smart Report the State so frequently cites indicates the opposite. The Smart Report states that those who have had prior contact with police are most likely to be arrested, charged, and prosecuted for new sex crimes.⁸⁷ In sum, North Carolina fails to reveal what "social science" might bolster its claim about the higher risk to children specifically presented by registered sex offenders.

IV. ONLINE RISK

The next empirical issue the *Packingham* materials address concerns evidence to support the notion that registered sex offenders pose a significant risk of sexually exploiting minors by means of SNSs. North Carolina's brief to the Supreme Court makes the following claim: "Sexual predators commonly use social networking sites to cull information about minors." It supports this assertion by citing two studies.

A. British Reports of Suspicious Online Activity

North Carolina's brief claims that "[o]ne study found that '48.5% of online child sexual exploitation reports received were linked to social networking sites." This statistic derives from an article in the British newspaper *The Telegraph*. The underlying source is a document generated by a division of the British national police agency concerning

polygraph as a risk prediction/treatment progress assessment tool. Paper presented at the Association for the Treatment of Sexual Abusers 23d Annual Research and Treatment Conference, Albuquerque, NM (2004).

⁸⁷ Smart Report, supra note 21, at 91 (citing Wendy Larcombe, Sex Offender Risk Assessment: The Need to Place Recidivism Research in the Context of Attrition in the Criminal Justice System, 18 VIOLENCE AGAINST WOMEN 482, 493 (2012), available at https://www.researchgate.net/profile/Wendy_Larcombe/publication/229161573_Sex_Offender_Risk_Assessment_The_Need_to_Place_Recidivism_Research_in_the_Context_of_Attrition_in_the_Criminal_Justice_System/links/5720364108aed056fa23655a/Sex-Offender-Risk-Assessment-The-Need-to-Place-Recidivism-Research-in-the-Context-of-Attrition-in-the-Criminal-Justice-System.pdf).

⁸⁸ Brief of Respondent, supra note 2, at 51.

⁸⁹ Id. at 51-52 (citing Christopher Hope, Facebook is a 'Major Location of Online Child Sexual Grooming', Head of Protection Agency Says, THE TELEGRAPH (Oct. 15, 2013), http://www.telegraph.co.uk/technology/facebook/10380631/Facebook-is-a-major-location-for-online-child-sexual-grooming-head-of-child-protection-agency-says.html).

communications it had received from the public about possible online sexual exploitation. But the report does not differentiate complaints that were substantiated as constituting a crime. Nor does the report distinguish whether the online exploiters were previously known sex offenders as compared to members of the general public. Plus, many of the reports did not suggest the involvement of any adults. For example, the report indicates that a majority of the reports involving sexually suggestive images of minors were self-generated without any coercion or exploitive acts by adults. Besides, *The Telegraph* article also quotes a British police official warning that much of the use of online social networks to contact children is by foreigners acting from outside Britain. In sum, the 48.5% statistic fails to substantiate North Carolina's need to ban registered residents from SNSs.

B. The Online Exploitation Study

North Carolina's brief cites a second study as purportedly supporting its claim about the prevalence of sexual predators gaming SNSs to prey on children:

Another study showed that 'in 82 percent of online sex crimes against minors, the offender used the victim's social networking site to gain information about the victim's likes and dislikes,' and 'in 62 percent of online sex crimes against minors, the offender used the victim's social networking site to gain home and school information about the victim.'94

However, neither of the statements in quotation marks are actual excerpts from the underlying study's report. Moreover, the statistical measures reported by North Carolina significantly misrepresent the study's actual findings. ⁹⁵ The study at issue was conducted by researchers with the Crimes

OCHILD EXPLOITATION AND ONLINE PROTECTION CENTRE, THREAT ASSESSMENT OF CHILD SEXUAL EXPLOITATION AND ABUSE 10 (2013), http://cdn.basw.co.uk/upload/basw 34939-8.pdf.

⁹¹ *Id*.

⁹² *Id*. at 12.

⁹³ The Telegraph article states that "British children were being 'harvested' by foreign abusers who were getting access to children in their homes over the internet." Hope, *supra* note 89. The chief of the Child Exploitation and Online Protection Centre commented that "[i]t is not uncommon to encounter situations where offenders in one country will target and harvest victims in a completely different part of the world." *Id*.

⁹⁴ Brief of Respondent, supra note 2, at 52 (citing Kimberly Mitchell et al., Use of Social Networking Sites in Online Sex Crimes Against Minors: An Examination of National Incidence and Means of Utilization, 47 J. ADOLESCENT HEALTH 183, 185 (2010), available at www.unh.edu/ccrc/pdf/CV174.pdf).

⁹⁵ The actual quote is: "These cases involved offenders who were using victims' SNSs to get information about the victims': (a) likes or interests (82% of cases involving offenders using SNSs to access information), (b) home or school (65%)." Mitchell et al., *supra* note 94, at 185. The reference to "[t]hese cases" is only of those cases in which offenders used

Against Children Resource Center using results from the National Juvenile Online Victimization survey. This survey queried a national sample of law enforcement agencies concerning arrests for online sex crimes against children (the "Online Exploitation Study"). The Online Exploitation Study did not distinguish sexual predators as North Carolina's claim suggests. The study concerns individuals arrested for online sexual exploitation of children, whether or not previously known as sex offenders.

Then the eighty-two percent figure is actually not of all arrests for online sex crimes against minors as North Carolina's brief conveys; it is the figure representing a small subset thereof. The Online Exploitation Study did concern arrests for online sex crimes against minors, but cases in which offenders used SNSs in such crimes comprised just one-third of those arrests. Then the study divided arrests involving SNSs into three groups: those involving identified victims, those with victims who were not identified, and those in which there were no real victims in the sense that they were cases in which undercover officers portrayed minors online. The eighty-two percent figure actually concerns just those cases in which the offenders used SNSs in cases with identified victims, a small subject of the larger sample. ⁹⁶

Crunching data contained in the Online Exploitation Study, the calculated percentage of offenders arrested for online sex crimes against children who used SNSs to gain information about the victim's likes and dislikes is actually twenty-two percent. ⁹⁷ And in a significant majority of those cases, the offenders were not gaining access to details about actual minors, but of data manufactured by undercover officers posing as children online. ⁹⁸ Thus, North Carolina's version inflates the number of cases in which offenders explored SNSs to access minors' likes and interests by a factor of four.

Then the sixty-two percent North Carolina's brief cites is mistaken on its face; the actual percentage is sixty-five percent. But again, the State misquotes what the rate represents. The Online Exploitation Study found that sixty-five percent of the cases involving offenders using SNSs in cases with identified minors specifically gained information about home or school. As with the other statistical measure, cases involving SNSs and identified minors were only a small subset of online arrests. Overall, only five percent of cases of online sex crimes with minors included access to a child's home or school information through SNSs. 99 Hence, North Carolina greatly exaggerates the frequency of offenders using SNSs to gain information about home or school in cases of online sexual exploitation. To make matters worse, the lawyer

SNSs to try make contact with identified minors.

⁹⁶ Mitchell et al., *supra* note 94, at 185.

⁹⁷ *Id*.

⁹⁸ *Id*.

⁹⁹ Id.

representing North Carolina at oral arguments in February 2017 repeated the same mistakes, erroneously reporting these same two results before the Supreme Court:

We know from studies that about 82 percent of online sex crimes against children, social networking websites were used to gain information about their likes and dislikes. And 62 percent of online sex crimes use – social networking websites to gain home and school information. So we know that there's a very high percentage of these offenders who – who are using social networking websites to find out information. 100

Regrettably, these significant overstatements of the prevalence of offenders exploiting SNSs may mislead the Supreme Court about the online dangers that registered sex offenders pose.

North Carolina's brief also ignores an important conclusion from this same study. The researchers reflected that

[w]hen considered in the context of the entire spectrum of places online where police are arresting people for illegal sexual intentions, SNSs do not appear to present risk in and of themselves or a greater risk than other online sites where people can meet and interact (e.g., chat rooms). Findings from this article support previous data that suggests the reality about Internet-initiated sex crimes, particularly those in which sex offenders meet juvenile victims online, is different, more complex, and more serious but less archetypically frightening than the publicity about these crimes suggest. ¹⁰¹

So, at the same time as North Carolina's representatives distort the statistics, they also ignore this important warning from the same study.

C. The Online Predators Study

North Carolina's brief additionally attempts to highlight the risk of registered sex offenders by referencing findings from a study titled "Trends in Arrests of 'Online Predators'" (the "Online Predators Study"). 102 This study was also conducted by researchers with the Crimes Against Children Research Center using data from the survey of law enforcement agencies about arrests during two time periods, roughly 2000 and 2006. The Petitioner's brief in *Packingham* filed earlier had used the Online Predators Study results to highlight that ninety-six percent of those arrested for

¹⁰⁰ Transcript of Oral Argument at 45, Packingham v. United States, No. 115-1194 (Feb. 27, 2017), https://www.supremecourt.gov/oral_arguments/argument_transcripts/2016/15-1194_0861.pdf.

 $^{101 \}text{ Id.}$ at 186.

¹⁰² Janis Wolak et al., Trends in Arrests of "Online Predators" (2009) [hereinafter *Online Predators Study*], http://scholars.unh.edu/cgi/viewcontent.cgi?article=1051&context=ccrc.

soliciting minors online were not registered sex offenders.¹⁰³ This result derives from the underlying study's finding that four percent of online solicitation arrestees were registered sex offenders.

To counter this statistic, North Carolina instead points to the finding in the Online Predators Study that the percentage of such arrests involving registered sex offenders actually doubled from 2000 to 2006. 104 North Carolina explains that the increase is not surprising as registries were in their infancy in 2000 and the percentage increased as more people were registered during that time frame. Oddly, North Carolina's argument here fails to explain why registered sex offenders are at greater risk considering the significant surge in the number of registered sex offenders as registries ramped up during the same time period might explain the increase. Moreover, North Carolina ignores the researchers' own conclusion in the Online Predators Study. Considering that the percentage of registered sex offender in the online sex crimes was not more than four percent, the study authors found that these small statistics mean that "aiming strategies to prevent online predation at [the] population [of registered sex offenders] may have limited utility because so few online predators are registered sex offenders." 105

The Online Predators Study also disavows North Carolina's claim that the Internet is fueling a wave of sexual exploitation of children. The researchers concluded that '[w]hile there was an increase in arrests of offenders using the Internet to seek sex with minors [from 2000 to 2006], there was during the same period a decrease in reports of overall sex offenses against children and adolescents and a decrease in arrests for such crimes." ¹⁰⁶ The researchers further explain:

[T]the facts do not suggest that the Internet is facilitating an epidemic of sex crimes against youth. Rather, increasing arrests for online predation probably reflect increasing rates of youth Internet use, a migration of crime from offline to online venues, and the

¹⁰³ Brief for Petitioner at 92, Packingham v. North Carolina, No. 15-1194 (U.S. Dec. 15, 2016), 2016 U.S. S. Ct. Briefs LEXIS 4588, *available at* http://www.scotusblog.com/wp-content/uploads/2016/12/15-1194-petitioner-merits-brief.pdf.

¹⁰⁴ Brief of Respondent, supra note 2, at 58 (citing Online Predators Study, supra note 102, at 7-9). One issue with this argument is that it actually undercuts the State's implication that the increase in the percentage of registered persons to be arrested for soliciting youth online means that greater restraint of registered offenders is required. As more and more Americans become registered sex offenders because of the expanding scope of such laws, then it makes statistical sense that the proportion of those arrested for any crime would happen to be registered. Indeed, if a state simply required everyone to register, regardless of their histories, the percent of online solicitors who were registered would rise to 100%. Then governmental officials could (albeit unreasonably) argue that there was an even greater need to monitor all residents because everyone is at risk of being an online solicitor.

¹⁰⁵ Online Predators Study, supra note 102, at 4.

¹⁰⁶ Id. at 3.

growth of law enforcement activity against online crimes. 107

At least the States' Amicus Brief attempts to specifically address the risk of registered sex offenders in claiming that "[r]egistered sex offenders account for four to five percent of online solicitors of undercover police officers." The source cited for this statistic in turn referred to three studies. However, none of the three studies actually addressed registered sex offenders. Instead, the three studies found that of the samples investigated, four to five percent of those arrested for online solicitations had prior sex offense arrests or convictions, not that they were registered. The two groups are not synonymous. Individuals with prior sex offenses may not be registered and those registered might not have been charged or convicted of sex crimes. The state of the registered might not have been charged or convicted of sex crimes.

The trouble with statistics does not end here. The States' Amicus Brief attempts to compute the percentage of adult Americans who are registered sex offenders. In what it calls "the States' math" the brief concludes that one-third of one percent of American adults are registered sex offenders. ¹¹¹ The States' math is wrong. It included in the numerator the number of registered sex offenders in the United States. The denominator used the number of adult Americans. ¹¹² The mathematical lapse is that the numerator contains registered sex offenders who are juveniles. Hence, the formula is incorrect, rendering the final percentage also mistaken.

V. CONCLUSIONS

In its amicus brief, an association of sex offender treatment professionals correctly emphasize the "myth of homogeneity" concerning sex offenders. ¹¹³ Instead, scientific research indicates "registrants are not a homogenous group of 'sex offenders' that should be monolithically managed. Rather, registrants comprise a diverse group of individuals, each different from the next in terms of past criminal history, behavioral patterns, and risk of recidivism." ¹¹⁴ Further, the experts properly warn that policies that target sex offenders

¹⁰⁷ Online Predators Study, supra note 102, at 2.

¹⁰⁸ States' Amicus Brief, supra note 2, at 9 (citing MICHAEL SETO, INTERNET SEX OFFENDERS 183 (2013)).

¹⁰⁹ SETO, *supra* note 108, at 328 tbl. 4.

¹¹⁰ See generally Ofer Raban, Be They Fish or not Fish: The Fishy Registration of Nonsexual Offenders, 16 WM. & MARY BILL RTS. J. 497 (2007), available at law.uoregon.edu/.../Ofer Raban-fishornotfish.pdf.

¹¹¹ States' Amicus Brief, supra note 2, at 9 n.7.

¹¹² The "States' math" notes that "there are about 323,127,513 Americans, of which 22.9% of which are adults and 77.1% are not." *Id.* at 10 n. 7. Obviously, the "States' math" erroneously switches the percentage of adults and children here.

¹¹³ ATSA Brief, supra note 3, at 13.

¹¹⁴ Id. at 3.

which are not based on some empirical reality are unlikely to be effective. In the end, North Carolina and thirteen other states weighing in as friends of the court in *Packingham v. North Carolina* offer a troubling version of the scientific evidence in an attempt to support a significant ban on registered sex offenders' use of social networking sites. It is not clear if the states' legal representatives were merely naïve and uneducated on the true science behind the empirical studies they tout. The alternative that they are intentionally misleading the Supreme Court on the risks of sex offenders as a group would be regrettable for ethical and political reasons. Hopefully, the Supreme Court will see through the guise of science the states work so hard to convey as simply reconstituting the myth of sex offenders.

¹¹⁵ *Id.* at 11.