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### Title

Being Transgender in the Era of Trump: Compassion Should Pick Up Where Science Leaves Off

### Permalink

<https://escholarship.org/uc/item/42q6b1xw>

### Journal

UC Irvine Law Review , 8(4)

### ISSN

2327-4514

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### Publication Date

2018-07-01

# Being Transgender in the Era of Trump: Compassion Should Pick Up Where Science Leaves Off

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## INTRODUCTION

In a divisive time,<sup>1</sup> few issues are more polarizing than how Americans treat transgender (“trans”) individuals.<sup>2</sup> This small sliver of Americans—0.6% of all adults or 1.4 million people<sup>3</sup>—has prompted polar responses from legislators and policymakers. Many states have protected trans individuals from discrimination in

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1. Joel Achenbach & Scott Clement, *America Really Is More Divided than Ever*, WASH. POST (Jul. 16, 2016), [https://www.washingtonpost.com/national/america-really-is-more-divided-than-ever/2016/07/17/fbfebee6-49d8-11e6-90a8-fb84201e0645\\_story.html?utm\\_term=.c2992158c9e7](https://www.washingtonpost.com/national/america-really-is-more-divided-than-ever/2016/07/17/fbfebee6-49d8-11e6-90a8-fb84201e0645_story.html?utm_term=.c2992158c9e7).

2. Throughout this Article, transgender or “trans” is used as an umbrella term to refer to individuals whose gender identity is different from their sex at birth. This umbrella definition is not meant to detract from the importance of the wide-range of gender identities. Because preferred terminology can vary from person-to-person, transgender is used for simplicity’s sake. Outdated terms such as transsexual are used when used in the scientific studies being cited.

3. ANDREW R. FLORES ET AL., WILLIAMS INST., HOW MANY ADULTS IDENTIFY AS TRANSGENDER IN THE UNITED STATES 3 (2016), <https://williamsinstitute.law.ucla.edu/wp-content/uploads/How-Many-Adults-Identify-as-Transgender-in-the-United-States.pdf> [https://perma.cc/P6SX-Q869].

housing, hiring, and public accommodations.<sup>4</sup> Other states, however, have passed or are considering legislation that regulates access by trans individuals to everyday things, such as bathrooms.<sup>5</sup> Some states have gone as far as barring municipalities from giving greater protections to trans individuals in local laws.<sup>6</sup>

As legislation concerning trans individuals continues to take form, an increasingly fractured public discourse has arisen. Public support for trans people has leapt with increased public awareness of discrimination.<sup>7</sup> Advocates have also put a public face on the struggles that transgender persons face—think, Caitlyn Jenner and Laverne Cox.<sup>8</sup> Others have pushed back against concessions for a population that a short time ago was virtually unseen, suggesting it is nothing more than “trendy” to be transgender.<sup>9</sup>

4. See *infra* Part I (listing California, Colorado, Connecticut, Delaware, Hawaii, Iowa, Maine, Maryland, Massachusetts, Minnesota, Nevada, New Hampshire, New Jersey, New Mexico, New York, Oregon, Rhode Island, Utah, Vermont, Washington, and Wisconsin, as well as the District of Columbia).

5. See, e.g., Public Facilities Privacy & Security Act, N.C. GEN. STAT. §§ 115C-521.2, 143.760 (2016), *repealed by* Preemption of Regulation of Access to Multiple Occupancy Restrooms, H.B. 142, 2017 Gen. Assemb., Reg. Sess. (2017).

6. For Arkansas, see Intrastate Commerce Improvement Act, ARK. CODE ANN. §§ 14-1-401 to -403 (2015); David Koon, *Testing the Discrimination Law*, ARK. TIMES (May 28, 2015), <http://www.arktimes.com/arkansas/testing-the-discrimination-law/Content?oid=3871873> [<https://perma.cc/GU45-NPMR>] (citing challenges in Eureka Springs, Conway, and Little Rock). For Tennessee, see Equal Access to Intrastate Commerce Act, TENN. CODE ANN. §§ 4-21-102, 7-51-1801 to -1802 (2011); *Howe v. Haslam*, No. M2013-01790-COA-R3CV, 2014 WL 5698877 (Tenn. Ct. App. Nov. 4, 2014). For North Carolina, see Public Facilities Privacy & Security Act, N.C. GEN. STAT. §§ 115C-521.2, 143.760 (2016), *repealed by* Preemption of Regulation of Access to Multiple Occupancy Restrooms, H.B. 142, 2017 Gen. Assemb., Reg. Sess. (2017).

7. SARGENT SHRIVER NAT'L CTR. ON POVERTY LAW, MORE THAN AWARENESS: PUBLIC POLICY CAN IMPROVE TRANSGENDER WOMEN'S LIVES (2016), [http://www.ncdsv.org/SSNCPL\\_Woman-View-More-Than-Awareness\\_11-7-2016.pdf](http://www.ncdsv.org/SSNCPL_Woman-View-More-Than-Awareness_11-7-2016.pdf) [<https://perma.cc/B8L2-AMN2>]; Rachel Matlow, *Transgender Issues: Public Awareness Is on the Rise*, CBC NEWS (May 2, 2014), <http://www.cbc.ca/news/transgender-issues-public-awareness-is-on-the-rise-1.2596011> [<https://web.archive.org/web/20140505013021/http://www.cbc.ca/news/transgender-issues-public-awareness-is-on-the-rise-1.2596011>]; *Transgender and Gender Identity Respect Campaign*, OFF. HUM. RTS., <https://ohr.dc.gov/transrespect> [<https://perma.cc/PAR8-B2MB>] (last visited July 14, 2018).

8. *Laverne Cox, Caitlyn Jenner Lead Celeb Outrage at Trump's Transgender Military Ban*, MTV UK (July 27, 9:34 AM), <http://www.mtv.co.uk/donald-trump/news/laverne-cox-caitlyn-jenner-lead-celeb-outrage-at-trumps-transgender-military-ban> [<https://perma.cc/TKD8-G76Y>] (noting that Caitlyn Jenner is an Olympian and reality television star and Laverne Cox is an actress and transgender activist); Peter Sblendorio, *Stars Slam President Trump over Transgender Military Ban*, N.Y. DAILY NEWS (July 26, 2017, 10:07 AM), <http://www.nydailynews.com/entertainment/stars-slam-trump-transgender-military-ban-article-1.3357826> [<https://web.archive.org/web/20171112174541/http://www.nydailynews.com/entertainment/stars-slam-trump-transgender-military-ban-article-1.3357826>]; see also Katy Steinmetz, *Person of the Year: The Short List No. 7 Caitlyn Jenner*, TIME, <http://time.com/time-person-of-the-year-2015-runner-up-caitlyn-jenner> [<https://perma.cc/YLU7-TNCM>] (last visited July 14, 2018) (explaining in greater detail who Caitlyn Jenner is).

9. Mark Hodges, *Teens Are Becoming Transgender Because It's Trendy, Expert Says*, LIFE SITE NEWS (Apr. 12, 2017), <https://www.lifesitenews.com/news/govt-provides-gender-service-for-kids-who-fancy-themselves-as-transgender> [<https://perma.cc/2RW8-AZWG>] (“Apparently, declaring oneself ‘transgender’ is trendy. ‘One said to me, ‘Doctor Steve . . . I want to be transgender, it’s the new black.’”); see also Liberty McArtor, *Trendy to Be Transgender: Child Psychologist Says Many Kids Confused on Gender Identity*, STREAM (Apr. 11, 2017), <https://stream.org/transgender-is-trendy>

Recently, the larger debate over the status of and protections for trans individuals has become inflamed by a searing dispute over a single question: whether being trans has any biological or genetic basis or is, rather, a “pathogenic meme.”<sup>10</sup> A review article published by a pair of professors associated with Johns Hopkins University (“Hopkins”) drew forceful criticism from the scientific community and advocates.<sup>11</sup> In a 143-page paper, replete with 373 footnotes, Dr. Paul McHugh, the University Distinguished Service Professor of Psychiatry and Professor of Psychiatry and Behavioral Sciences at Hopkins, and Dr. Lawrence Mayer, a statistician at Arizona State University and a Scholar in Residence at Hopkins at that time,<sup>12</sup> urged that:

[A]most nothing is well understood when we seek biological explanations for what causes some individuals to state that their gender does not match their biological sex. The findings that do exist often have sample-selection problems, and they lack longitudinal perspective and explanatory power . . . .

Yet despite the scientific uncertainty, drastic interventions are prescribed and delivered to patients identifying, or identified, as transgender . . . there is a lack of reliable studies on the long-term effects of these interventions. We strongly urge caution in this regard.<sup>13</sup>

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[<https://perma.cc/VN23-BQLM>] (“[M]any children ‘self-diagnose’ as transgender after social media ‘binges.’”).

10. Paul McHugh, *Transgenderism: A Pathogenic Meme*, WITHERSPOON INST. (June 10, 2015), <http://www.thepublicdiscourse.com/2015/06/15145/> [<https://perma.cc/E4R8-GQ9L>]. In this article, McHugh says that the “idea that one’s biological sex is a choice” led to “widespread cultural acceptance of the concept. And, that idea, quickly accepted in the 1980s, has since run through the American public like a revelation or ‘meme’ affecting much of our thought about sex.” *Id.* McHugh likens this “meme” to the Hans Christian Andersen story “The Emperor’s New Clothes,” saying that much like the onlookers there, the public today “knows that a disfavored opinion is worse than bad taste” and thus “fear to identify [gender cross identification] as a misapprehension.” *Id.*

11. LAWRENCE S. MAYER & PAUL R. MCHUGH, SEXUALITY AND GENDER: FINDINGS FROM THE BIOLOGICAL, PSYCHOLOGICAL, AND SOCIAL SCIENCE 104 (2016), [https://www.thenewatlantis.com/docLib/20160819\\_TNA50SexualityandGender.pdf](https://www.thenewatlantis.com/docLib/20160819_TNA50SexualityandGender.pdf) [<https://perma.cc/S2WE-TUWD>]; *see also infra* Part III.

12. Paul R. McHugh, M.D., JOHNS HOPKINS MED., <http://www.hopkinsmedicine.org/profiles/results/directory/profile/0003340/paul-mchugh> [<https://perma.cc/R869-Y55F>] (last visited July 14, 2018); Lawrence Mayer, ARIZ. ST. U., <https://isearch.asu.edu/profile/59185> [<https://perma.cc/CHW4-JNG8>] (last visited July 14, 2018); *see also* MAYER & MCHUGH, *supra* note 11, at 2.

13. MAYER & MCHUGH, *supra* note 11, at 115; *see also infra* Part III.

Mayer and McHugh's paper has been used by legislators and others to discredit the needs and experiences of transgender individuals.<sup>14</sup> In the words of U.S. Representative Louis Gohmert, "It is time to stop the nonsense."<sup>15</sup>

The blowback has reverberated within Hopkins and beyond. Hopkins staff, students, and alumni called on Hopkins to "publicly and specifically disavow [Mayer and McHugh's] statements and publications on LGBT individuals" and to clearly state that the pair's "rhetoric" is "personal opinion and not the official position—in fact, contrary to the official position and all of the best evidence—of Hopkins institutions."<sup>16</sup> The Human Rights Campaign ("HRC"), arguably the most influential gay rights organization in the nation, reacted swiftly.<sup>17</sup> It demanded that Hopkins "correct the record—clarifying that McHugh and Mayer's opinions do not represent [Hopkins], and that its healthcare services provided reflect the scientific consensus on LGBTQ health and well-being . . . ." <sup>18</sup> Hopkins declined to do so.<sup>19</sup>

The disagreement about biological explanations for being transgender misses the most critical point: trans persons experience enormous psychological distress across their lives.<sup>20</sup> By one estimate, as many as four in ten trans individuals attempt suicide.<sup>21</sup> Beyond suicide risk, trans individuals often struggle with depression and

14. See, e.g., J.R. Hoell, *Rep. JR Hoell: HB 478 Is a Danger to Women and Children*, CONCORD MONITOR (Mar. 5, 2017), <http://www.concordmonitor.com/Endangering-women-and-children-in-NH-8446648> [<https://web.archive.org/web/20170914130146/http://www.concordmonitor.com/Endangering-women-and-children-in-NH-8446648>].

15. 162 CONG. REC. H3498 (daily ed. June 7, 2016) (statement of Rep. Gohmert). Representative Gohmert's remark was made in debate over a proposal by the Veteran's Administration to provide gender reassignment surgery for trans veterans.

16. Tari Hanneman, *Johns Hopkins Community Calls for Disavowal of Misleading Anti-LGBTQ "Report"*, HUM. RTS. CAMPAIGN (Oct. 6, 2016), <https://www.hrc.org/blog/johns-hopkins-community-calls-for-disavowal-of-misleading-anti-lgbtq-report> [<https://perma.cc/2YMS-7F8J>]; see also PETITION TO HOPKINS TO ADDRESS FALSE LGBT REPORTS (2016), [http://assets2.hrc.org/files/documents/Petition\\_to\\_Hopkins\\_9.29.16.pdf](http://assets2.hrc.org/files/documents/Petition_to_Hopkins_9.29.16.pdf) [<https://perma.cc/AT3H-WS4Q>].

17. *McHugh Exposed*, HUM. RTS. CAMPAIGN, <https://www.hrc.org/mchughexposed> [<https://perma.cc/KF65-C3NP>] (last visited July 14, 2018); see also *HRC Story*, HUM. RTS. CAMPAIGN, <https://www.hrc.org/hrc-story> [<https://perma.cc/BWH4-8R6J>] (last visited July 14, 2018) (indicating HRC is "the largest national lesbian, gay, bisexual, transgender and queer civil rights organization. . .").

18. Hanneman, *supra* note 16.

19. *Why Johns Hopkins Hospital Received the 25 Point Deduction in the HEI*, HUM. RTS. CAMPAIGN, <http://www.hrc.org/resources/johns-hopkins> [<https://perma.cc/A7J4-CA2T>] (last visited July 14, 2018).

20. Gaps in our understanding of gender dysphoria, and particularly whether the desire to transition will be fixed for children who express it early on, present a difficult question for families who face it. Not surprisingly, these families actually experience a lot of psychological stress and depression themselves. This Article does not address the challenges facing families when making decisions for children.

21. See Ann P. Haas et al., *Suicide Attempts Among Transgender and Gender Non-Conforming Adults*, NAT'L TRANSGENDER DISCRIMINATION SURV. (2014) (reporting that the rate of suicide attempts among trans individuals ranges as high as 41%); see also Laura Ungar, *Transgender People Face Alarming High Risk of Suicide*, USA TODAY (Aug. 16, 2015, 12:11 PM), <https://www.usatoday.com/story/news/nation/2015/08/16/transgender-individuals-face-high-rates-suicide-attempts/31626633/> [<https://perma.cc/RGT8-Y6BP>].

anxiety at rates that “far surpass the rates of those for the general population.”<sup>22</sup> For children raised in unwelcoming households, this psychological distress is amplified and can be crushing.<sup>23</sup>

This Article argues that an appropriate response to the difficulties facing trans persons should not become mired down in a scientific debate about causation. Whether the experience of being transgender stems from a genetic or biological basis, or is more explainable as a result of one’s environment—the classic nature versus nurture debate<sup>24</sup>—matters little to the very real public health crisis facing this community. Compassion should guide the discussion.<sup>25</sup> Elsewhere, I make an affirmative case for nondiscrimination protections encompassing the full LGBT community.<sup>26</sup> This Article stakes out a more modest claim: that this scientific debate is a distraction from a real and present public health crisis affecting trans members of our community.

Part I gives a brief description of see-sawing protections for trans persons in federal law with the change of administrations; it also describes stark differences between the states, where lawmakers take very different stances on the need for nondiscrimination protections. This oscillating treatment underlines that the “T” has become the ground zero in the culture war over LGBT rights. Part II reviews incidence studies showing how quickly the trans population seems to have ballooned and links those findings to how researchers ask demographic questions and define key terms. Part III reviews claims made by Mayer and McHugh in the *New Atlantis* paper, as well as claims made by others in reliance on that piece. This Part traces the controversy not to Mayer’s and McHugh’s observations about the limits of our existing knowledge—something every study author acknowledges, as does HRC. Instead, Part III examines broader statements used as capstones to specific critiques that have inflamed the debate. Part IV briefly sketches the nascent science about cross-gender identification, noting its limits. Part V then documents

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22. Stephanie L. Budge et al., *Anxiety and Depression in Transgender Individuals: The Roles of Transition Status, Loss, Social Support, and Coping*, 81 J. CONSULTING & CLINICAL PSYCHOL. 545 (2013); Beth Hoffman, *An Overview of Depression Among Transgender Women*, DEPRESSION RES. & TREATMENT 1 (2014). For a more detailed discussion, see *infra* Part V.

23. For a firsthand account, see Shannon Price Minter, *Belief and Belonging: Reconciling Legal Protections for Religious Liberty and LGBT Youth*, in RELIGIOUS FREEDOM, LGBT RIGHTS, AND THE PROSPECTS FOR COMMON GROUND (William N. Eskridge, Jr. & Robin Fretwell Wilson eds., forthcoming 2018).

24. Compare MAYER & MCHUGH, *supra* note 11, at 7 (“The understanding of sexual orientation as an innate, biologically fixed property of human beings—the idea that people are ‘born that way’—is not supported by scientific evidence.”), with Melissa Healy, *Scientists Find DNA Differences Between Gay Men and Their Straight Twin Brothers*, L.A. TIMES, Oct. 8, 2015, <http://www.latimes.com/science/sciencenow/la-sci-sn-genetic-homosexuality-nature-nurture-20151007-story.html> [<https://web.archive.org/web/20180411071605/http://www.latimes.com/science/sciencenow/la-sci-sn-genetic-homosexuality-nature-nurture-20151007-story.html>].

25. See discussion *infra* Part V.

26. See Robin Fretwell Wilson, *The Nonsense About Bathrooms: How Purported Concerns over Safety Block LGBT Nondiscrimination Laws and Obscure Real Religious Liberty Concerns*, 20 LEWIS & CLARK L. REV. 1373, 1400–05 (2017).

the depression and emotional struggles borne by this community that all too often end in suicide. This Part argues that this profile represents a classic public health crisis which can, and should be, addressed, whatever the underlying basis for identifying with a gender different from one's sex at birth.

### I. LEGAL STATUS IN FLUX

Swirling around this discussion is a new political dynamic: legal protections secured by transgender people are being reevaluated in the era of President Trump. The legal status of transgender individuals is in flux both at the federal and state levels.<sup>27</sup>

At the federal level, the tangible gains realized by the trans community under the Obama Administration are being recalibrated in real time.<sup>28</sup> President Trump's tweet announcing that transgender persons may no longer serve in the military is proving but one instance of this phenomenon.<sup>29</sup> U.S. Attorney General Jeff Sessions issued a memorandum on October 4, 2017, reversing the interpretation by former Attorney General Eric Holder that Title VII protects individuals from discrimination on the basis of gender identity.<sup>30</sup> Former Obama Administration general counsel to the U.S. Equal Employment Opportunity Commissions David Lopez described the change as a "brazen" "flip-flop."<sup>31</sup>

27. Protections for LGBT persons are being walked back in certain realms. Sara Hansard, *Same-Sex Partner, HIPAA Rules Pulled by Trump Administration*, BNA'S HEALTH L. REPORTER, Oct. 9, 2017 ("A proposed rule that would have required long-term care facilities funded by Medicare and Medicaid to treat same-sex partners the same as other marriage partners was withdrawn Oct. 3 by the Trump administration.").

28. See Exec. Order No. 13,782, 82 Fed. Reg. 15,607 (Mar. 27, 2017); U.S. Dep't. of Justice & Dep't of Educ., Dear Colleague Letter, Feb. 22, 2017.

29. John Bowden, *Mattis Appalled by Trump Tweets Announcing Transgender Ban: Report*, HILL (July 28, 2017), <http://thehill.com/policy/defense/344290-mattis-appalled-by-trump-tweets-announcing-transgender-military-ban-report> [<https://perma.cc/6P98-8CSB>] ("[A]fter consultation with my Generals and military experts, please be advised that the United States government will not accept or allow transgender individuals to serve in any capacity in the U.S. Military. Our military must be focused on decisive and overwhelming victory and cannot be burdened with the tremendous medical costs and disruption that transgender in the military would entail."). The President later followed this tweet with an official order to the Secretary of Defense and Secretary of Homeland Security to reinstate a prior ban on transgender military service; that order has yet to be enforced. See Memorandum for the Secretary of Defense [and] the Secretary of Homeland Security, 82 Fed. Reg. 41, 319 (Aug. 25, 2017); Dan Lamothe, *Transgender Ban Frozen as Mattis Moves Forward with New Review of Options*, WASH. POST, Aug. 29, 2017, [https://www.washingtonpost.com/news/checkpoint/wp/2017/08/29/pentagon-chief-mattis-freezes-trumps-ban-on-transgender-troops-calls-for-more-study/?utm\\_term=.419547558e60](https://www.washingtonpost.com/news/checkpoint/wp/2017/08/29/pentagon-chief-mattis-freezes-trumps-ban-on-transgender-troops-calls-for-more-study/?utm_term=.419547558e60) (explaining Defense Secretary Mattis will not enact a ban on transgender individuals serving in the military until he conducts a study).

30. Erin Mulvaney, *Jeff Sessions Memo, Reversing Transgender Protections, Further Inflames Divisions*, NAT'L L.J. (Oct. 5, 2017, 2:07 PM), <http://www.nationallawjournal.com/id=1202799739126/Jeff-Sessions-Memo-Reversing-Transgender-Protections-Further-Inflames-Divisions?mcode=1202615432818&curindex=1&slreturn=20170906060204> (detailing memo).

31. *Id.*; Erin Mulvaney, *Ex-EEOC GC David Lopez, Morgan Lewis' Speights Deconstruct Federal Labor Rules*, NAT'L L.J. (July 1, 2017, 12:00 AM), <http://www.nationallawjournal.com/id=1202790281010/ExEEOC-GC-David-Lopez-Morgan-Lewis-Speights-Deconstruct-Federal-Labor-Rules>. To be certain, critics at the time described the EEOC's position as nakedly political and brazen, too. See, e.g., Ed Whelan, *Eric Holder's Transgendered Mutilation of Title VII*, NAT'L

While it remains to be seen how far the Trump Administration will go in uprooting Obama-era protections,<sup>32</sup> President Trump has named polarizing figures on civil rights issues to key positions tasked with enforcing nondiscrimination protections.<sup>33</sup> Many now fear that access to gender reassignment services under the Patient Protection and Affordable Care Act (“ACA”) will be in the cross-hairs next.<sup>34</sup> In this see-sawing of rights, gain is followed by loss, like a game of pong.

States are more mixed in the legal protections they give to trans persons. Roughly two-fifths of the states protect trans individuals against discrimination in housing, hiring, and public accommodations, with the number of states varying by precisely what the law covers (housing and hiring only or housing, hiring, and public accommodations).<sup>35</sup> Three states have barred municipalities from enacting

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REV. (Dec. 19, 2014, 3:30 PM), <http://www.nationalreview.com/bench-memos/395084/eric-holders-transgendered-mutilation-title-vii-ed-whelan> [<https://perma.cc/U58T-P73T>]. EEOC has responsibility for enforcing Title VII, but lacks rulemaking authority as to sex discrimination. Melissa Hart, *Skepticism and Expertise: The Supreme Court and the EEOC*, 74 *FORDHAM L. REV.* 1944–45 (2006).

32. Amy Goldstein, Juliet Eilperin & William Wan, *Trump Administration Narrows Affordable Care Act’s Contraception Mandate*, *WASH. POST*, Oct. 6, 2017, [https://www.washingtonpost.com/national/health-science/trump-administration-could-narrow-affordable-care-acts-contraception-mandate/2017/10/05/16139400-a9f0-11e7-92d1-58c702d2d975\\_story.html?hpid=hp\\_hp-top-table-main\\_birthcontrol-1124am%3Ahomepage%2Fstory&tid=a\\_inl&utm\\_term=.a34c8b1ff627](https://www.washingtonpost.com/national/health-science/trump-administration-could-narrow-affordable-care-acts-contraception-mandate/2017/10/05/16139400-a9f0-11e7-92d1-58c702d2d975_story.html?hpid=hp_hp-top-table-main_birthcontrol-1124am%3Ahomepage%2Fstory&tid=a_inl&utm_term=.a34c8b1ff627).

33. Emma Green, *The Man Behind Trump’s Religious-Freedom Agenda for Health Care*, *ATLANTIC* (Jun. 7, 2017), <https://www.theatlantic.com/politics/archive/2017/06/the-man-behind-trumps-religious-freedom-agenda-for-health-care/528912/> [<https://perma.cc/F5MS-4EKY>]; Robert Pear, *Foes of Obama-Era Rule Work to Undo Birth Control Mandate*, *N.Y. TIMES*, Jul. 10, 2017, [https://www.nytimes.com/2017/07/10/us/politics/birth-control-contraception-health-care-bill.html?\\_r=0](https://www.nytimes.com/2017/07/10/us/politics/birth-control-contraception-health-care-bill.html?_r=0) [[https://web.archive.org/web/20171124132139/https://www.nytimes.com/2017/07/10/us/politics/birth-control-contraception-health-care-bill.html?\\_r=0](https://web.archive.org/web/20171124132139/https://www.nytimes.com/2017/07/10/us/politics/birth-control-contraception-health-care-bill.html?_r=0)].

34. Jacklyn Wille, *After Military Ban, Are Transgender Health Protections Next?*, *BLOOMBERG L.* (July 27, 2017). See *infra* Part V for a discussion of statutory nondiscrimination protections in the ACA.

35. For instance, the states protecting against discrimination in public accommodations are California, Colorado, Connecticut, Delaware, Hawaii, Iowa, Maine, Maryland, Massachusetts, Minnesota, Nevada, New Hampshire, New Jersey, New Mexico, New York, Oregon, Rhode Island, Vermont, Washington, and Wisconsin, as well as the District of Columbia. See CAL. GOV’T CODE §§ 1135, 12920, 12940, and 12949 (West 2016); COLO. REV. STAT. § 24-34-402 (2014); COLO. REV. STAT. § 24-34-501 (2014); CONN. GEN. STAT. § 46a-60 (2009); CONN. GEN. STAT. § 46a-64c (2016), DEL. CODE ANN. tit. 19, § 711 (2014); DEL. CODE ANN. 1953, tit. 6, § 4603 (2014), D.C. CODE § 2-1402.11 (2012); D.C. CODE § 2-1402.21 (2015); HAW. REV. STAT. § 378-2 (2015); HAW. REV. STAT. § 515-3 (2015); 775 ILL. COMP. STAT. 5/102(A) (2010); 775 ILL. COMP. STAT. 5/3-101 (2010); IOWA CODE § 216.2 (2016); IOWA CODE § 216.8 (2016); 2005 Bill Text ME S.B. 413, PL 1993, c. 327 (effective June 29, 2005); ME. REV. STAT. tit. 5, § 4582 (2015); MD. CODE ANN., STATE GOV’T § 20-606 (West 2015); MD. CODE ANN., STATE GOV’T § 20-0705 (West 2015), MASS. GEN. LAWS ch. 151B § 4 (2016); MASS. GEN. LAWS ch. 151B § 4 (2016), MINN. STAT. § 363.08 subd. 2 (2015); MINN. STAT. § 363.09 (2015), NEV. REV. STAT. § 613.340 (2015); NEV. REV. STAT. § 118.100 (2015), N.H. REV. STAT. § 354-A:6 (2015); N.H. REV. STAT. § 354-A:10 (2015); N.J. STAT. ANN. § 10:5-4 (2015); N.J. STAT. ANN. § 10:5-9.1 (2015), N.M. STAT. ANN. § 28-1-7 (2015); N.M. STAT. ANN. § 28-1-7 (2015), N.Y. EXEC. LAW §§ 291, 296(1)–(1-a) (McKinney 2016); N.Y. EXEC. LAW § 290 (McKinney 2016), OR. REV. STAT. § 659A.403 (2015); OR. REV. STAT. § 659A.421 (2015), R.I. GEN. LAWS § 28-5-7 (2015); R.I. GEN. LAWS § 34-37-2.2 & 2.3 (2015), VT. STAT. ANN. tit. 21, § 495(a) (2014); VT. STAT. ANN. tit. 9, § 4503 (2015), WASH. REV. CODE § 49.60.180 (2015); WASH. REV. CODE § 49.60.222 (2015), WISC. STAT. § 111.36 (2015);



ordinances to protect LGBT persons from discrimination—laws that are presently being challenged.<sup>36</sup>

Additionally, one state, Mississippi, purported to protect the “sincerely held religious beliefs or moral convictions” that “[m]ale (man) or female (woman) refer to an individual’s immutable biological sex as objectively determined by anatomy and genetics at time of birth.”<sup>37</sup> For lack of standing, Mississippi’s law survived constitutional challenges that the law was an establishment of religion because it privileged certain religious beliefs over others and that the law violated equal protection because it provided different protections to different religious beliefs.<sup>38</sup> Because no Mississippi law presently protects LGBT persons from discrimination in any realm, including in government employment, Mississippi’s purported protections for those “sincerely held religious beliefs” are more illusory than real.<sup>39</sup>

North Carolina’s controversial legislation, now largely repealed, also barred localities from protecting LGBT persons but went a step further, focusing on the use of public bathrooms and other spaces. It barred localities and businesses from making accommodations for trans individuals in the use of facilities—requiring trans persons to use bathrooms matching their sex at birth, a decision which has implications for their safety.<sup>40</sup> That stance precipitated a public outcry and

WISC. STAT. § 106.50 (2015). The states that statutorily prohibit discrimination in housing and employment are: California, Colorado, Connecticut, Delaware, Hawaii, Illinois, Iowa, Maryland, Massachusetts, Minnesota, Nevada, New Hampshire, New Jersey, New Mexico, New York, Oregon, Rhode Island, Utah, Vermont, and Washington, as well as the District of Columbia. *See* CAL. GOVT. CODE § 12926 (2018); COLO. REV. STAT. § 24-34-401 (2016); CONN. GEN. STAT. § 46a-51 (2017); DEL. CODE ANN., tit. 19 § 710 (2016); D.C. CODE § 2-1402.02; D.C. CODE § 2-1401.03; HAW. REV. STAT. § 378-1 (2013); IOWA CODE § 216.2 (2009); ME. REV. STAT. tit. 5 § 4553 (2012); MD. CODE ANN., STATE GOV’T § 20-601 (2015); MASS. GEN. LAWS, ch. 151B § 1 (2014); MINN. STAT. ANN. § 363A.03; NEV. REV. STAT. § 613.310 (2017); N.H. REV. STAT. § 354-A:2 (2007); N.J. STAT. § 10:5-5 (2017); N.M. STAT. ANN. § 28-1-2 (2007); N.Y. EXEC. LAW, art. 15 § 292 (2014); R.I. GEN. LAWS § 28-5-6 (2013); UTAH CODE ANN. § 34A-5-102 (West 2016); VT. STAT. ANN. tit. 21, § 495d; WASH. REV. CODE § 49.60.040 (2009).

36. For Arkansas, see S.B. 202, 90th Gen. Assemb., Reg. Sess. (Ark. 2015); Koon, *supra* note 6 (citing challenges in Eureka Springs, Conway, and Little Rock). For Tennessee, see Tenn. Pub. Ch. 278 (2011); *Howe v. Haslam*, 2014 WL 5698877 (Tenn. Ct. App. 2014). North Carolina’s controversial “bathroom-of-one’s-birth” law also restricted the ability of municipalities to protect LGBT persons from discrimination. *See* An Act to Provide for Single-Sex Multiple Occupancy Bathroom and Changing Facilities in Schools and Public Agencies and to Create Statewide Consistency in Regulation of Employment and Public Accommodations, 2016 N.C. Sess. Laws 3. That restriction remains in place after the 2017 partial repeal. *See* Reset of S.L. 2016-3, 2017 N.C. Sess. Laws 4. The repeal measure provides that “No local government in this State may enact or amend an ordinance regulating private employment practices or regulating public accommodations,” through December 1, 2020, when it sunsets. *Id.*

37. H.B. 1523, 131st Sess. (Miss. 2016).

38. *Barber v. Bryant*, 860 F.3d 345, 350 (5th Cir. 2017).

39. *See* Robin Fretwell Wilson, ‘Religious Freedom’ Bill a Mixed Bag for Mississippi, CLARION LEDGER (Apr. 1, 2016, 1:52 PM), <http://www.clarionledger.com/story/opinion/columnists/2016/04/01/religious-freedom-bill-mixed-bag-mississippi/82523280/> [<https://perma.cc/7G24-FFFB>].

40. N.C. Gen. Assemb., H.B. 2, 2016 2d Extra Sess. (N.C. 2016). For an assessment of the safety claims made by advocates of these bills, see Wilson, *supra* note 26, at 1400–05.

numerous boycotts, causing significant economic harm to the state.<sup>41</sup> By one estimate, if the legislation had not been repealed, the losses would have equaled \$3.76 billion.<sup>42</sup>

In February 2017, North Carolina repealed the portion of the law pertaining to restrooms and other facilities that are privately owned.<sup>43</sup> Despite the fallout from North Carolina's law, other states introduced their own proposed "bathroom-of-one's-birth" laws in 2017.<sup>44</sup> None have been enacted.

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41. See, e.g., Edward Helmore, *North Carolina Reels from Business Backlash to Anti-LGBT Law*, GUARDIAN, Apr. 15, 2016, <https://www.theguardian.com/world/2016/apr/15/north-carolina-lgbt-law-business-backlash> [<https://perma.cc/AK6L-JRDR>]; Rob Dauster, *NCAA Moves Tournament Games to South Carolina*, NBC SPORTS (Oct. 7, 2016, 10:30 AM), <http://collegebasketball.nbcports.com/2016/10/07/ncaa-moves-tournament-games-to-south-carolina/> [<https://perma.cc/STP4-8CV2>].

42. *'Bathroom Bill' to Cost North Carolina \$3.76 Billion*, CNBC (Mar. 14, 2017, 7:00 AM), <https://www.cnbc.com/2017/03/27/bathroom-bill-to-cost-north-carolina-376-billion.html> [<https://perma.cc/L6TQ-NPRN>].

43. N.C. Gen. Assemb., H.B. 142, 2017 Reg. Sess. (2017). The new measure still "preempts" all "[s]tate agencies, boards, offices, departments, institutions, branches of government, including The University of North Carolina and the North Carolina Community College System, and political subdivisions of the State, including local boards of education, . . . from regulation of access to multiple occupancy restrooms, showers, or changing facilities, except in accordance with an act of the General Assembly." *Id.*

44. See, e.g., H.R. 41, 2017 Leg., 90th Sess. (Minn. 2017) (requiring school restrooms, locker rooms, and showers to be used by a single sex, where sex is determined by chromosomes and at birth, while permitting single user facilities to accommodate transgender students); S. 98, 99th Gen. Assemb., 1st Reg. Sess. (Mo. 2017) (requiring school restrooms, locker rooms, and showers designated for male or female students only with biological sex defined as "the physical condition of being male or female, which is determined by a person's chromosomes, and is identified at birth by a person's anatomy and indicated on their birth certificate"); S. 6, 84th Leg., 2017 Sess. (Tex. 2017) (prohibiting municipalities from creating restroom and changing facility requirements while requiring schools and government-controlled facilities to designate bathrooms by "biological sex," defined as "the physical condition of being male or female, which is stated on a person's birth certificate"; exemptions for custodial purposes, repairs, emergency assistance, or a child accompanying a caregiver); S. 1, 2017 Leg., Reg. Sess. (Alaska 2017) (providing three options for restrooms or changing facilities open to the public: (1) single user, (2) single gender, (3) gender neutral with attendant to monitor use; gender is not defined in the bill); H.R. 202, 99th Gen. Assemb., 1st Reg. Sess. (Mo. 2017) (requiring all public restrooms to be gender-divided and preempting contrary municipal laws); H.R. 3012, 2017-18 Gen. Assemb., 122nd Sess. (S.C. 2017) (forbidding local governments from enacting laws or adopting standards other than biological sex, defined as "the physical condition of being male or female, which is stated on a person's birth certificate," for restroom use in public accommodations or private clubs, but making exemptions for custodial purposes, repairs, emergency assistance, or a child accompanying a caregiver); S. 6, 2017 Leg., Reg. Sess. (Tex. 2017) (prohibiting municipalities from creating restroom and changing facility requirements while requiring schools and government-controlled facilities to designate bathrooms by "biological sex," defined as "the physical condition of being male or female, which is stated on a person's birth certificate," but making exemptions for custodial purposes, repairs, emergency assistance, or a child accompanying a caregiver); H.R. 1011, 65th Leg., Reg. Sess. (Wash. 2017) (allowing public and private entities to limit access to sex-segregated facilities "if the person is preoperative, nonoperative, or otherwise has genitalia of a different gender from that which the facility is segregated" for, with exceptions for parents or caretakers who take a dependent child or disabled person of the opposite sex into a restroom to help them). A third set of bills would encompass government buildings but not all public accommodations. See, e.g., H.R. 106, 2017 Leg., Reg. Sess. (Ky. 2017) (requiring patrons to use the bathroom and changing facilities matching their "biological sex" in all facilities under control of state or local governments); H.R. 1612, Gen. Assemb., 2017 Sess. (Va. 2017) (requiring

Litigation over transgender rights has followed a similar path. In 2015, the Department of Justice filed a “Statement of Interest” in the Virginia case brought by the ACLU on behalf of a student, born female, but who now identifies as male.<sup>45</sup> The Statement of Interest argued that the position taken by the Office of Civil Rights (“OCR”) was the appropriate interpretation of requirements under Title IX,<sup>46</sup> the federal law banning discrimination on the basis of sex in education.<sup>47</sup> Specifically, OCR contended that “[t]he term ‘sex’ as it is used in Title IX is broad and encompasses gender identity, including transgender status.”<sup>48</sup> The student, G.G., alleged he was allowed to use the boys’ restrooms for a few weeks until the school district enacted a policy that students must use bathrooms conforming to their biological sex.<sup>49</sup> For students with “gender identity issues,” the district designated private single-use facilities.<sup>50</sup> The ACLU contended the policy impermissibly “segregates transgender students from their peers.”<sup>51</sup> The student felt stigmatized.<sup>52</sup>

Initially, the federal District Court dismissed the claim, concluding that OCR’s interpretation was not a plausible reading of Title IX and conflicted with earlier Department of Education regulations permitting schools to segregate based on sex.<sup>53</sup> The court found that sex includes biological sex.<sup>54</sup>

The ACLU appealed to the U.S. Court of Appeals for the Fourth Circuit. In a 2-1 decision, the Fourth Circuit ruled in favor of the ACLU.<sup>55</sup> The majority concluded that the trial judge should have deferred to the Department of Education’s 2015 interpretation of the 1972 statute and that the trial judge employed

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government entities to provide separate restrooms by sex, defined as “the physical condition of being male or female as shown on an individual’s original birth certificate,” creating a right of action against government entity if someone encounters person of the opposite sex in those restrooms, and requiring school notification of parents if a student seeks designation as opposite sex); see generally Ray Sanchez, *First Days of 2017 Bring New ‘Bathroom Bills’*, CNN (Jan. 7, 2017, 10:11 AM), <http://www.cnn.com/2017/01/06/politics/bathroom-bill-state-legislation/index.html> [<https://web.archive.org/web/20180428053704/http://www.cnn.com/2017/01/06/politics/bathroom-bill-state-legislation/index.html>].

45. *G.G. v. Gloucester County School Board*, ACLU (Mar. 6, 2017), <https://www.aclu.org/cases/gg-v-gloucester-county-school-board> [<https://perma.cc/9ZXH-HZGP>].

46. 20 U.S.C. § 1681 (2012).

47. Statement of Interest of the U.S., *G.G. ex rel. Grimm v. Gloucester Cty. Sch. Bd.*, 822 F.3d 709 (4th Cir. 2016) (No. 15-00054).

48. *Id.*

49. *Id.* (“Specifically, G.G. alleges that, although the school had allowed him to use the boys’ restroom for approximately seven weeks without incident, the school board passed a policy limiting the use of restroom facilities to students with ‘corresponding biological genders’ and required students with ‘gender identity issues’ to use an alternative private facility.”).

50. *G.G. ex rel. Grimm*, 822 F.3d at 716.

51. *G.G. v. Gloucester County School Board*, *supra* note 45.

52. The school provided access to a single-user restroom in the school nurse’s office. *G.G. ex rel. Grimm*, 822 F.3d at 727.

53. *G.G. ex rel. Grimm v. Gloucester Cty. Sch. Bd.*, 132 F. Supp. 3d 736, 745–46 (E.D. Va. 2015).

54. *Id.*

55. *G.G. ex rel. Grimm*, 822 F.3d at 709.

the wrong standard for determining whether to issue a preliminary injunction.<sup>56</sup> A petition for rehearing *en banc* was denied.<sup>57</sup> The School District appealed to the U.S. Supreme Court which granted review.<sup>58</sup>

While the case was pending in the U.S. Supreme Court, the Trump Administration rescinded the Obama-era guidance on Title IX's application to gender identity.<sup>59</sup> The Supreme Court vacated and remanded to the Fourth Circuit, which vacated the preliminary injunction in April of 2017.<sup>60</sup>

The Fourth Circuit scheduled oral argument in September of 2017 to determine the merits of the claim in the absence of the Department of Education's now-rescinded guidance.<sup>61</sup> Of the three judges on the original 2-1 Fourth Circuit panel, one has retired.<sup>62</sup> G.G. has since graduated from high school.<sup>63</sup> The Fourth Circuit panel remanded to the district court to determine "whether this case has become moot," cancelling oral argument.<sup>64</sup> The ACLU argued that G.G. may return to the school as an alumnus, making the case not moot.<sup>65</sup>

Whatever the outcome of G.G.'s case, clearly uncertainty clouds the prospects for trans individuals under the law. Adding to this instability is a public discourse that treats trans persons as a phenomenon that emerged from nowhere as the next Section shows, and has become focused on the wrong questions, a point made in Sections III and IV.

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56. *Id.* The Department of Education had said:

The Department's Title IX regulations permit schools to provide sex-segregated restrooms, locker rooms, shower facilities, housing, athletic teams, and single-sex classes under certain circumstances. When a school elects to separate or treat students differently on the basis of sex in those situations, a school generally must treat transgender students consistent with their gender identity. OCR also encourages schools to offer the use of gender-neutral, individual-user facilities to any student who does not want to use shared sex-segregated facilities.

Statement of Interest of the U.S. (Exhibit B) at 3, *G.G. ex rel. Grimm*, 132 F. Supp. 3d 736 (No. 15-0054).

57. *G.G. v. Gloucester Cty. Sch. Bd.*, 824 F.3d 450 (4th Cir. 2016).

58. *Gloucester County School Board v. G.G. ex. rel. Grimm No. 16-273 Proceedings and Orders*, SUP. CT. U.S., <https://www.supremecourt.gov/search.aspx?filename=/docketfiles/16-273.htm> [<https://perma.cc/8DMD-AABE>].

59. Andrew Kreighbaum, *Transgender Protections Withdrawn*, INSIDE HIGHER ED (Feb. 23, 2017), <https://www.insidehighered.com/news/2017/02/23/trump-administration-reverses-title-ix-guidance-transgender-protections> [<https://perma.cc/26FE-3STC>].

60. *Gloucester Cty. Sch. Bd. v. G.G. ex rel. Grimm*, 137 S. Ct. 1239 (2017); *G.G. v. Gloucester Cty. Sch. Bd.*, 853 F.3d 729 (4th Cir. 2017).

61. Becca Mitchell, *4th Circuit Sends Gavin Grimm's Case Back to District Court to Decide if It Is Moot*, WTKR (Aug. 2, 2017, 2:28 PM), <http://wtkr.com/2017/08/02/4th-circuit-sends-gavin-grimms-case-back-to-district-court-to-decide-if-it-is-moot/> [<https://perma.cc/GYZ8-9G5X>].

62. Luke Broadwater & Ian Duncan, *Pugh Names Federal Judge Andre Davis as Baltimore's New City Solicitor*, BALT. SUN (May 3, 2017, 7:44 PM), <http://www.baltimoresun.com/news/maryland/baltimore-city/bs-md-ci-andre-davis-solicitor-20170503-story.html> [<https://perma.cc/3AU7-TYGX>].

63. Amended Complaint at 14, *Grimm v. Gloucester Cty. Sch. Bd.*, No. 15-00054 (E.D. Va. filed Aug. 11, 2017).

64. *Grimm v. Gloucester Cty. Sch. Bd.*, 869 F.3d 286 (4th Cir. 2017).

65. *Id.*

## II. INCREASING VISIBILITY

The increasing visibility of the trans community has contributed to both greater awareness and charges that being trans amounts to a mere fad.<sup>66</sup> In 2016, Andrew Flores and colleagues at the Williams Institute reported that 0.6% of U.S. adults identify as transgender, equating to 1.4 million Americans.<sup>67</sup> The incidence of self-reported transgender adults doubled in the space of five years.<sup>68</sup> Outside the United States, the reported numbers of trans persons are on the rise, too. Consider patients at a Melbourne children's hospital. In 2003, only one child identified as transgender every two years; by 2014, 104 children identified as trans that year alone.<sup>69</sup> Reported incidence varies significantly by country.<sup>70</sup> The wild swings in incidence across years and between studies has fed into charges that it is simply trendy to say one is transgender.<sup>71</sup>

What should one make of this variability and clear uptick?

Importantly, incidence studies rely on self-reports. Flores' study is a good example. It utilized the Behavioral Risk Factor Surveillance System to collect self-reported data through telephone interviews.<sup>72</sup> The interviewers ask respondents, "Do you consider yourself to be transgender?"<sup>73</sup> If the respondent asked the interviewer what "transgender" means, the interviewer said:

Some people describe themselves as transgender when they experience a different gender identity from their sex at birth. For example, a person born into a male body, but who feels female or lives as a woman would be transgender. Some transgender people change their physical appearance so

66. See Hodges, *supra* note 9.

67. FLORES ET AL., *supra* note 3.

68. Compare FLORES ET AL., *supra* note 3 (estimating 0.6% of U.S. adults are transgender), with GARY J. GATES, WILLIAMS INST. HOW MANY PEOPLE ARE LESBIAN, GAY, BISEXUAL, AND TRANSGENDER? (2011), <http://williamsinstitute.law.ucla.edu/wp-content/uploads/Gates-How-Many-People-LGBT-Apr-2011.pdf> [<https://perma.cc/YT4W-XTAZ>] (estimating 0.3% of U.S. are adults are transgender).

69. Michelle Telfer et al., *Transformation of Health-Care and Legal Systems for the Transgender Population: The Need for Change*, 51 J. PEDIATRICS & CHILD HEALTH 1051 (2015).

70. Greta De Cuypere et al., *Prevalence and Demography of Transsexualism in Belgium*, 22 EUR. PSYCHIATRY 137 (2007). Another study indicated that the rates are dependent on definitions. Lindsay Collin et al., *Prevalence of Transgender Depends on the "Case" Definition: A Systematic Review*, 13 J. SEXUAL MED. 613 (2016) (reviewing six studies using the number of people seeking sex-reassignment surgeries and finding dramatic differences across countries, stating that "[n]otably, the within-study comparisons consistently showed that transgender prevalence is indeed increasing over time."); see also FLORES ET AL., *supra* note 68; Yueqin Hu et al., *Stability of Self-Reported Same-Sex and Both-Sex Attraction from Adolescence to Young Adulthood*, 45 ARCHIVES SEXUAL BEHAV. 651 (2016); Jiska Ristori & Thomas D. Steensma, *Gender Dysphoria in Childhood*, 28 INT'L REV. PSYCHIATRY 13 (2016); Michael Ross et al., *Cross-Cultural Approaches to Transsexualism: A Comparison Between Sweden and Australia*, 63 ACTA PSYCHIATRICA SCANDINAVICA 75 (1981); Telfer et al., *supra* note 69; Jaimie Veale, *Prevalence of Transsexualism Among New Zealand Passport Holders*, 42 AUSTL. & N.Z. J. PSYCHIATRY 887 (2008); Madeleine S.C. Wallien & Peggy T. Cohen-Kettenis, *Psychosexual Outcome of Gender-Dysphoric Children*, 47 J. AM. ACAD. CHILD & ADOLESCENT PSYCHIATRY 1413 (2008).

71. See Hodges, *supra* note 9.

72. FLORES ET AL., *supra* note 3, at 7.

73. *Id.*

that it matches their internal gender identity. Some transgender people take hormones and some have surgery. A transgender person may be of any sexual orientation—straight, gay, lesbian, or bisexual.<sup>74</sup>

Note that one could answer in the affirmative without having taken hormones or other steps to change one's outward appearance.

Indeed, the term “transgender” is an umbrella term, encompassing individuals who identify with a gender that is different from their sex at birth. That difference may occur in connection with a person being born with a disorder of sex development, sometimes called “intersex,” that may have resulted in surgical “correction” at birth—a condition that affects 1 in 2,000 children born today.<sup>75</sup> These children may present with ambiguous genitalia or primary sex characteristics of both sexes.<sup>76</sup> When a child is born with one of these conditions, health care providers often take steps to “normalize” the child's genitalia—that is, they do surgery on the child to make the child's genitalia present as male or female.<sup>77</sup>

Whether born intersex or not, a person may simply identify with a gender different from their body's sex characteristics.<sup>78</sup> As Part IV briefly explains, in fetal development, sex characteristics develop at a different time than the fetal brain, resulting in mixed signals, although little is known definitively about why some persons identify with another gender.<sup>79</sup>

Socially, the term “transgender” is used to describe a wide range of gender identities.<sup>80</sup> Definitions and inclusion criteria matter greatly to reported incidence. As Lindsay Collin and colleagues observe, “The reported prevalence estimates are greatly affected by differences in methodology and by variable definitions of transgender.”<sup>81</sup> Indeed, “the results can range several hundredfold depending on how the numerator was ascertained.”<sup>82</sup>

Authoritative medical bodies have developed specific inclusion criteria for a diagnosis of gender dysphoria, a diagnosis on which health care coverage may

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74. *Id.*

75. Nora Caplan-Bricker, *Their Time: After Generations in the Shadows, the Intersex Rights Movement Has a Message for the World: We Aren't Disordered and We Aren't Ashamed*, WASH. POST, Oct. 5, 2017, [http://www.washingtonpost.com/sf/style/2017/10/05/the-intersex-rights-movement-is-ready-for-its-moment/?utm\\_term=.3b6905312b61](http://www.washingtonpost.com/sf/style/2017/10/05/the-intersex-rights-movement-is-ready-for-its-moment/?utm_term=.3b6905312b61).

76. *What is Intersex?*, INTERSEX SOC'Y N. AM., [http://www.isna.org/faq/what\\_is\\_intersex](http://www.isna.org/faq/what_is_intersex) [<https://perma.cc/9M9V-XLBK>] (last visited July 14, 2018).

77. Charlotte Greenfield, *Should We 'Fix' Intersex Children?*, ATLANTIC (July 8, 2014), <https://www.theatlantic.com/health/archive/2014/07/should-we-fix-intersex-children/373536/> [<https://perma.cc/6MZE-4TGQ>].

78. *What Is Gender Dysphoria?*, AM. PSYCHIATRIC ASS'N (Feb. 2016), <https://www.psychiatry.org/patients-families/gender-dysphoria/what-is-gender-dysphoria> [<https://perma.cc/4A72-47DG>].

79. *Infra* Part IV.

80. *Glossary of Terms - Transgender*, GLAAD, <https://www.glaad.org/reference/transgender> [<https://perma.cc/U3F5-Y74W>] (last visited July 14, 2018) (“People under the transgender umbrella may describe themselves using one or more of a wide variety of terms - including *transgender*.”).

81. Collin et al., *supra* note 70, at 613.

82. *Id.* at 624.

depend.<sup>83</sup> The fifth edition of the Diagnostic and Statistical Manual of Mental Disorders (“DSM-V”), published by the American Psychological Association, very precisely defines gender dysphoria to require at least two of the following symptoms for at least six months in adolescents and adults:

1. A marked incongruence between one’s experienced/expressed gender and primary and/or secondary sex characteristics;
2. A strong desire to be rid of one’s primary and/or secondary sex characteristics;
3. A strong desire for the primary and/or secondary sex characteristic of the other gender;
4. A strong desire to be of the other gender;
5. A strong desire to be treated as the other gender; and
6. A strong conviction that one has the typical feelings and reactions of the other gender.<sup>84</sup>

In children, for a diagnosis of gender dysphoria, the DSM-V requires that the child display at least six of the following for at least six months:

1. A strong desire to be of the other gender or an insistence that one is the other gender;
2. A strong preference for wearing clothes typical of the opposite gender;
3. A strong preference for cross-gender roles in make-believe play or fantasy play;
4. A strong preference for the toys, games or activities stereotypically used or engaged in by the other gender;
5. A strong preference for playmates of the other gender;
6. A strong rejection of toys, games and activities typical of one’s assigned gender;
7. A strong dislike of one’s sexual anatomy; and
8. A strong desire for the physical sex characteristics that match one’s experienced gender.<sup>85</sup>

Notably, the diagnosis in adolescents and adults requires “significant distress or problems functioning;” in children, it requires “significant distress or impairment in function.”<sup>86</sup> Patently, not all trans individuals report distress.<sup>87</sup>

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83. Eve Glicksman, *Transgender Today*, 44 APA MONITOR 36 (2013) (“While still somewhat stigmatizing, a diagnosis of gender dysphoria ensures that more services for transgender people will be covered by health insurers.”).

84. *What Is Gender Dysphoria?*, *supra* note 78.

85. *Id.*

86. *Id.*

87. *Id.*; *infra* Part V (noting that a significant fraction of trans individuals do not experience psychological distress).

Additionally, not all trans individuals will pursue the full gamut of possible steps to transition.<sup>88</sup> The first step is typically counseling.<sup>89</sup> A 2010 study by Jaime Grant and colleagues on behalf of the National Center for Transgender Equality and the National Gay and Lesbian Task Force, which at the time was “the most extensive survey of transgender discrimination ever undertaken,” found that 75% “of respondents received counseling related to their gender identity and an additional 14% hoped to receive it someday. Only 11% of the overall sample did not want it.”<sup>90</sup> Even among those who had medically transitioned, 89% had received counseling; among those “who had some type of surgery,” 91% had received counseling.<sup>91</sup> This counseling may involve a “gender-related mental health diagnosis,” such as “Gender Identity Disorder,” now termed gender dysphoria.<sup>92</sup>

A typical next step is hormone therapy.<sup>93</sup> Grant and colleagues found that “[s]ixty-two percent (62%) of respondents have had hormone therapy, with the likelihood increasing with age; an additional 23% hope to have it in the future.”<sup>94</sup>

An additional, often last, step is surgery.<sup>95</sup> This step may involve a range of procedures. For instance, in a male transitioning to female, typical surgeries include chest surgery, orchiectomy (or removal of testes), and vaginoplasty.<sup>96</sup> Of the transgender women in the study, 18% had chest surgery, 54% want it, and 28% do not.<sup>97</sup> Twenty-one percent have had surgery to remove their testes, 59% want that

88. JAIME M. GRANT ET AL., NATIONAL TRANSGENDER DISCRIMINATION SURVEY REPORT ON HEALTH AND HEALTH CARE 3 (2010) (“Transition is a process that some, but not all, transgender and gender non-conforming people undertake to live as a gender different from the one they were assigned at birth. For some, the journey traveled from birth sex to their current gender may involve primarily a social change but no medical component; for others, medical procedures are an essential step toward embodying their gender.”).

89. *Id.* at 10 (“Because of the WPATH Standards of Care, medical providers often require a letter from a qualified counselor stating that the patient is ready for transition-related medical care; transgender people may seek out counseling for that purpose. Counseling may also play a role in assisting with the social aspects of transition . . .”).

90. *Id.*

91. *Id.* at 10, 18.

92. *Id.* at 10; Dani Heffernan, *The APA Removes “Gender Identity Disorder” from Updated Mental Health Guide*, GLAAD (Dec. 3, 2012), <https://www.glaad.org/blog/apa-removes-gender-identity-disorder-updated-mental-health-guide> [<https://perma.cc/2X2S-FNGJ>].

93. See THE WORLD PROF'L ASSOC. FOR TRANSGENDER HEALTH, STANDARDS OF CARE FOR THE HEALTH OF TRANSSEXUAL, TRANSGENDER, AND GENDER NONCONFORMING PEOPLE (2011); see also Lenny Bernstein, *Here's How Sex Reassignment Surgery Works*, WASH. POST, Feb. 9, 2015, [https://www.washingtonpost.com/news/to-your-health/wp/2015/02/09/heres-how-sex-reassignment-surgery-works/?utm\\_term=.0b05f5b0cc13](https://www.washingtonpost.com/news/to-your-health/wp/2015/02/09/heres-how-sex-reassignment-surgery-works/?utm_term=.0b05f5b0cc13); Matt McMillen, *Changing Genders: How It's Done*, WEBMD (Apr. 22, 2015), <https://www.webmd.com/a-to-z-guides/news/20150422/transgender-homomes-surgery#1> [<https://web.archive.org/web/20180331054357/https://www.webmd.com/a-to-z-guides/news/20150422/transgender-homomes-surgery#1>].

94. GRANT ET AL., *supra* note 88, at 10.

95. *See id.*

96. *Id.* at 11 (“Transgender women may elect to undertake a variety of surgeries, including breast augmentation, orchiectomy (removal of testes), vaginoplasty (creation of a vagina and/or removal of the penis) . . .”).

97. *Id.*



surgery someday, and 20% do not.<sup>98</sup> Twenty percent have had vaginoplasty, 60% want it someday, and 20% do not want it.<sup>99</sup>

For a female transitioning to male, typical surgeries include chest surgery, hysterectomy, metoidoplasty (a procedure that involves releasing the clitoris and creating testes), and phalloplasty.<sup>100</sup> Of the transgender men in the study, 41% have had chest surgery, 51% want it someday, and 8% do not want it.<sup>101</sup> Twenty percent have had a hysterectomy, 57% want one someday, and 23% do not want it.<sup>102</sup> Three percent have had a metoidoplasty, 51% want it, and 45% do not.<sup>103</sup> Two percent have had phalloplasty, 26% want it someday, and 72% do not want it.<sup>104</sup>

In studies like the one by Flores and colleagues, a person anywhere in the process of transitioning might say “yes” when asked if they are trans. Interviewers do not tell respondents how far along they must be in order to answer in the affirmative.<sup>105</sup>

Still, the increase in incidence rates cannot be chalked up to definitions and self-reported data alone. “[W]ithin-study comparisons consistently show that transgender prevalence is indeed increasing over time.”<sup>106</sup>

Increases over time may be attributable to better awareness by doctors and the public. A recent survey of pediatricians indicated that only 47.1% felt confident in providing care to transgender youth.<sup>107</sup> The researchers recommended enhanced training for pediatricians in transgender-specific care.<sup>108</sup> Naturally, as doctors become more familiar with transgender populations, diagnoses may become more prevalent. The rise in self-identification may follow better care.

Complicating this profile, some children transiently identify with another gender only to later have those feelings subside, feeding into charges that being transgender is a mere fad.<sup>109</sup> According to the DSM-V, among natal females—meaning persons whose genitalia at birth presented as female—and who experienced cross-gender identification, “12% to 50%” persisted in that

98. *Id.*

99. *Id.*

100. *Id.* at 12 (defining metoidoplasty as releasing the clitoris and creating testes and defining phalloplasty as surgically creating a penis and testes).

101. *Id.*

102. *Id.*

103. *Id.*

104. *Id.*

105. FLORES ET AL., *supra* note 3 (indicating one module simply asked “[d]o you consider yourself to be transgender?”).

106. Collin et al., *supra* note 70.

107. Stanley R. Vance Jr. et al., *Health Care Providers’ Comfort with and Barriers to Care of Transgender Youth*, 56 J. ADOLESCENT HEALTH 251, 251 (2015) (explaining the minority stress model).

108. Stanley R. Vance Jr. et al., *Enhancing Pediatric Trainees’ and Students’ Knowledge in Providing Care to Transgender Youth*, 60 J. ADOLESCENT HEALTH 425, 425–26 (2017).

109. See MAYER & MCHUGH, *supra* note 11, at 106; *What Is Gender Dysphoria?*, *supra* note 78; see also Thomas D. Steensma et al., *Factors Associated with Desistence and Persistence of Childhood Gender Dysphoria: A Quantitative Follow-Up Study*, 52 J. AM. ACAD. CHILD & ADOLESCENT PSYCHIATRY 582 (2013).

identification; “in natal males, persistence has ranged from 2.2% to 30%.”<sup>110</sup> Thus, for natal females who identify during childhood as male, the rates of *non*-persistence, or “melt,” may be as low as 50% and as high as 88%. For natal males, non-persistence ranged between 70% to 97.8%. However, a twenty-year, longitudinal study of trans children, which began in 2013, has indicated that “transgender identities in even very young children are surprisingly solid and consistent across measures, contradicting popular beliefs that such feelings are fleeting or that children are simply pretending to be the opposite gender.”<sup>111</sup> This degree of melt makes it extremely difficult to determine how best to support a child, or any person, and what meaningful support would look like, as explored more fully below.<sup>112</sup> As Part V will show, when parents socially support their child’s gender identity, it acts to reduce the child’s mental distress.<sup>113</sup>

In the face of this mixed picture, many parents struggle to decide how best to support their children. This struggle is perhaps most apparent with parents of children with disorders of sex development, children that older authorities refer to as “intersex.”<sup>114</sup> A study by David Sandberg and colleagues indicated that “[p]arents have reported levels of post-traumatic stress syndrome comparable to those reported by caregivers of children diagnosed with cancer.”<sup>115</sup> Some of the parents of these children fell into the “mild,” “moderate,” or “severe” ranges for anxiety and depression.<sup>116</sup>

Like these parents, transgender individuals often experience serious mental distress, culminating in dramatically increased suicide rates.<sup>117</sup> Ultimately, these

110. See MAYER & MCHUGH, *supra* note 11, at 106 (explaining this data “comes from the DSM-5 entry for ‘gender dysphoria’ and implies that the listed persistence rates apply to that precise diagnosis, the diagnosis of gender dysphoria was formalized by the DSM-5, so some of the studies from which the persistence rates were drawn may have employed earlier diagnostic criteria”); *What Is Gender Dysphoria?*, *supra* note 78.

111. Kristina R. Olson, *When Sex and Gender Collide: Studies of Transgender Kids Are Revealing Fascinating Insights About Gender in the Brain*, 317 SCI. AM. 44, 46 (2017) (noting “[r]esults so far show that trans children have just as firm a sense of their own gender as nontrans kids at very early ages, both when asked directly and when tested. Furthermore, trans kids follow different trajectories than children who simply prefer toys and clothes associated with the opposite gender.”). Importantly, “[w]hether these indicators of mental health stay strong as our cohort of trans children moves into the teen years remains to be seen, and certainly our all-volunteer sample is unlikely to be fully representative of all trans children alive today.” *Id.*

112. Current research suggests that a gender-affirming approach regarding socialization can improve outcomes in children. See *infra* Part V.

113. Kristina R. Olson, *Mental Health of Transgender Children Who Are Supported in Their Identities*, 137 PEDIATRICS 1 (2016); see also Olson, *supra* note 111.

114. Joel Hutcheson, *Disorders of Sex Development*, MEDSCAPE, <http://emedicine.medscape.com/article/1015520-overview?pa=c%2FL48uNyN1GmfL8hwRuT2127N%2F95DaIWlZaxtg0HNpb5R4%2F%2FnCsITJCByQuzt7C2Csja3GoFo%2B7aiuxPvYMYychrzF%2F7vlnSF6AEX%2F09M8%3D> [https://perma.cc/GJL3-YS85] (last updated July 17, 2017).

115. David E. Sandberg et al., *Interdisciplinary Care in Disorders/Differences of Sex Development (DSD): The Psychosocial Component of the DSD—Translational Research Network*, 175 AM. J. MED. GENETICS 279, 280 (2017).

116. *Id.* at 287.

117. See discussion *infra* Part V.

public health concerns are what should guide our discussion and public policy, rather than getting bogged down in the science or disputing the fact of increased numbers of people identifying as transgender.

As Part III chronicles, Mayer and McHugh point to the rates of “melt” to suggest that surgical and hormonal intervention in children is “especially troubling” and “premature since the majority of children who identify as the gender opposite their biological sex will not continue to do so as adults.”<sup>118</sup> In an article titled *Transgender Surgery Isn't the Solution*, McHugh went as far as to say “these medical interventions come close to child abuse.”<sup>119</sup>

### III. MAYER AND MCHUGH'S CONTROVERSY-PROVOKING PAPER

Mayer and McHugh's 143-page paper appeared in a journal whose mission is to improve “public understanding of the social, political, ethical, and policy implications of modern science and technology.”<sup>120</sup> Roughly half of the piece revisits an older debate about the nature of same-gender attraction.<sup>121</sup>

The remainder wades into even more nascent research on cross-gender identification. Mayer and McHugh ultimately conclude that claims that “biological differences determine the differences in gender identity . . . are unwarranted.”<sup>122</sup> Demands that Hopkins disassociate itself from the paper's conclusions fell on deaf ears, and Hopkins was downgraded accordingly in HRC's annual Healthcare Equality Index.<sup>123</sup> Social conservatives then leveled charges of hypocrisy at HRC for penalizing Hopkins while giving gold stars to employers like Walmart and Target, which do not assure “trans-bathroom access,” yet garner HRC's “100% LGBT equality rating.”<sup>124</sup>

Before turning to Mayer and McHugh's specific contentions and the resulting controversy, it is worth noting that the scientists studying gender identity routinely

118. MAYER & MCHUGH, *supra* note 11, at 115.

119. Paul McHugh, *Transgender Surgery Isn't the Solution*, WALL ST. J., June 13, 2014, at A13.

120. *About The New Atlantis*, NEW ATLANTIS, <http://www.thenewatlantis.com/about/> [<https://perma.cc/BVS2-95E2>] (last visited July 14, 2018).

121. MAYER & MCHUGH, *supra* note 11, at 10–58. For a review of scientific understanding about “the development and causes of homosexuality” and the connection between public views and “pro- and anti-homosexual attitudes,” see J. Michael Bailey et al., *Sexual Orientation, Controversy, and Science*, 17 PSYCHOL. SCI. PUB. INT. 45 (2016).

122. MAYER & MCHUGH, *supra* note 11, at 104.

123. Dawn Ennis, *Human Rights Campaign Sets Sights on Johns Hopkins After Controversial Trans Report*, NBC NEWS (Sept. 1, 2016), <https://www.nbcnews.com/feature/nbc-out/hrc-sets-sights-johns-hopkins-after-controversial-sexuality-gender-report-n641501> [<https://perma.cc/5GKB-2PRC>] (“Failure to take significant steps to distance Johns Hopkins Medicine from this line of Dr. McHugh's personal beliefs and opinions will be considered an activity that undermines LGBTQ equality and patient care for the purposes of the Healthcare Equality Index score for Johns Hopkins Hospital.”). For its part, the university refused to disavow the writing and was downgraded accordingly. *Why Johns Hopkins Hospital Received the 25 Point Deduction in the HEI*, *supra* note 19.

124. Glenn T. Stanton, *The Human Rights Campaign Is a Major Hypocrite on Trans Bathroom Policies*, FEDERALIST (May 24, 2017), <http://thefederalist.com/2017/05/24/human-rights-campaign-major-hypocrite-trans-bathroom-policies/> [<https://perma.cc/79X4-57GM>].

emphasize the limits of their studies and that societies' collective understanding is still developing.<sup>125</sup> For instance, the authors of one study showing differences in gross anatomical structure of the brain between natal and transgender individuals cautioned “that the method [used] is not informative about the separate individuals belonging to a group,” that the gross findings should be “taken with precaution” because of technological limitations like “the scanner resolution,” and “[o]ptimally, our transsexual subjects should have been strictly heterosexual . . . like our male controls.”<sup>126</sup> Other researchers generally emphasize that “[t]he research in this field is ongoing at least since the early 1990s—yet, the phenomenon is far from being studied sufficiently. Many of the results are inconsistent or still need to be replicated and the sample sizes are often extremely small.”<sup>127</sup>

Like the researchers themselves, Mayer and McHugh emphasize study limitations. They point to small sample sizes.<sup>128</sup> They emphasize methodological limitations.<sup>129</sup> They contrast findings from one study to the next, which they describe as “contradictory.”<sup>130</sup> After appraising the strength of these studies, they then starkly conclude that “there are *no studies* that demonstrate that any of the biological differences being examined have predictive power,” which they note is a “real challenge for any theory in science.”<sup>131</sup> They take to task:

all interpretations, usually in popular outlets, claiming or suggesting that a statistically significant difference between the brains of people who are transgender and those who are not is the cause of being transgendered or not—that is to say, that the biological differences determine the differences in gender identity—are unwarranted.<sup>132</sup>

Some of Mayer and McHugh's observations are fair, as HRC itself notes, “[T]he *New Atlantis* article mostly describes legitimate research.”<sup>133</sup> The real dispute appears not to be about Mayer and McHugh's observation about the limits of study design so much as about the takeaways they distill for public consumption. In HRC's words, “[T]he claims it makes based on that research are not backed by experts in the field.”<sup>134</sup>

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125. See *infra* notes 124–128 and accompanying text.

126. H. Berglund et al., *Male-to-Female Transsexuals Show Sex-Atypical Hypothalamus Activation when Smelling Odorous Steroids*, 18 CEREBRAL CORTEX 1900, 1906 (2007).

127. Elke Stefanie Smith et al., *The Transsexual Brain - A Review of Findings on the Neural Basis of Transsexualism*, 59 NEUROSCIENCE & BIOBEHAVIORAL REVS. 251, 262 (2015).

128. MAYER & MCHUGH, *supra* note 11, at 103–04.

129. *Id.*

130. *Id.* at 104.

131. *Id.* (emphasis added).

132. *Id.*

133. *Anti-Trans All-Stars Publish Biased Review of Gender and Sexual Orientation Research*, HUM. RTS. CAMPAIGN (Aug. 24, 2016), <https://www.hrc.org/blog/anti-trans-all-stars-publish-biased-review-of-gender-and-sexual-orientation> [<https://perma.cc/V6HF-MAJN>].

134. *Id.*

Case in point: Mayer and McHugh take direct aim at medical responses to cross-gender identification. They point to David Reimer as a cautionary tale.<sup>135</sup> David's penis was damaged during circumcision, leading to surgery and hormone treatment to present as female.<sup>136</sup> David's parents raised him as a girl, Brenda, and did not disclose to him that he was born male until David was fourteen.<sup>137</sup> Despite not knowing this, David self-identified as a boy.<sup>138</sup> When he eventually learned the truth, he began transitioning to be male.<sup>139</sup> David later took his own life at thirty-eight.<sup>140</sup> For Mayer and McHugh, David's story shows the "harm wrought by theories that gender identity can socially and medically be reassigned in children."<sup>141</sup> Yet, David's persistence in his gender identity underscores that feelings about one's gender identity can be unshakeable, and genuine. As Part IV shows, children in utero are sometimes exposed to mixed signals which some believe leave those children with the unshakeable belief that their primary sex characteristics simply do not mesh with who they are.

In a later piece, Mayer and McHugh, along with a third author, specifically dispute the need for any medical response for any child who identifies with another gender.<sup>142</sup> They emphasize the psychological distress that many trans people experience: "While there is much that is not known with certainty about gender dysphoria, there is clear evidence that patients who identify as the opposite sex often suffer a great deal. They have higher rates of anxiety, depression, and even suicide than the general population."<sup>143</sup> True, they say, "Something must be done to help these patients."<sup>144</sup> That observation itself is not controversial, as Part V shows.

But the conclusion they draw after that observation sweeps far more broadly and has become the stuff of headlines and political arguments. They stated: "[A]s scientists struggle to better understand what gender dysphoria is and what causes it, it would *not* seem prudent to embrace hormonal treatments and sex reassignment as the *foremost* therapeutic tools for treating this condition."<sup>145</sup> Clearly, the rates of persistence make these questions incredibly difficult for the parents and child who are facing them.<sup>146</sup> Importantly, the law largely leaves these decisions to families.<sup>147</sup> As noted before, families are under enormous psychological strain as they navigate

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135. See MAYER & MCHUGH, *supra* note 11, at 92.

136. *Id.*

137. *Id.*

138. *Id.*

139. *Id.*

140. *Id.*

141. *Id.*

142. See Paul W. Hruz, Lawrence S. Mayer & Paul R. McHugh, *Growing Pains: Problems with Puberty Suppression in Treating Gender Dysphoria*, NEW ATLANTIS, Spring 2017, at 3, 27.

143. *Id.*

144. *Id.*

145. *Id.* (emphasis added).

146. See *supra* notes 109–13 and accompanying text.

147. See generally Robin Fretwell Wilson, *Introduction* to THE CONTESTED PLACE OF RELIGION IN FAMILY LAW (Robin Fretwell Wilson ed., 2018).

these questions.<sup>148</sup> As with the *New Atlantis* piece, this critique follows a pattern: discussion of the limits of our scientific understanding, followed by a sweeping policy conclusion. And predictably, headlines in some media outlets screamed: “Hormone therapy is a horrible risk for kids,”<sup>149</sup> “Put children’s safety first, not ideology.”<sup>150</sup> People alarmed by the trio’s conclusions were equally vociferous, labeling it “pernicious junk science stalking trans kids.”<sup>151</sup>

Mayer and McHugh make much of the fact that “compared to the general population, adults who have undergone sex-reassignment surgery continue to have a higher risk of experiencing poor mental health outcomes.”<sup>152</sup> The authors premise their opposition against surgical intervention in part on the fact that suicide rates remain high even after transitioning.<sup>153</sup> This persistence of poor mental health outcomes is indicative of the ineffectiveness of surgical or hormonal interventions, they say.<sup>154</sup>

In a 2014 article in the *Wall Street Journal*, McHugh seems to suggest that surgical intervention *increases* suicide rates in transgender individuals.<sup>155</sup> He relies on a 2011 study conducted at the Karolinska Institute in Sweden, which found that trans individuals who underwent surgery had “considerably higher risks for mortality, suicidal behavior, and psychiatric morbidity than the general population.”<sup>156</sup> The study authors cautioned that these “results should not be interpreted [to mean that] sex reassignment per se increases morbidity and mortality. Things might have been even worse without sex reassignment.”<sup>157</sup> One of the study’s authors, Dr. Cecilia Dhejne, expressed “frustration” that her findings were being “misrepresented.”<sup>158</sup> Overlooking the possibility that surgery may have

148. *Id.*

149. Naomi Schaefer Riley, *Hormone Therapy Is a Horrible Risk for Kids*, N.Y. POST, June 20, 2017, <http://nypost.com/2017/06/20/hormone-therapy-is-a-horrible-risk-for-kids> [<https://web.archive.org/web/20180517063226/https://nypost.com/2017/06/20/hormone-therapy-is-a-horrible-risk-for-kids/>].

150. Katherine Kersten, *Put Children’s Safety First, Not Ideology*, TWINCITIES.COM (July 18, 2017), <http://www.twincities.com/2017/07/18/kersten-put-childrens-safety-first-not-ideology/> [<https://perma.cc/KA73-CF5T>].

151. Zack Ford, *The Pernicious Junk Science Stalking Trans Kids*, THINKPROGRESS (Sept. 5, 2017), <https://thinkprogress.org/transgender-children-desistance-a5caf61fc5c6/> [<https://perma.cc/JYC6-EKTZ>].

152. MAYER & MCHUGH, *supra* note 11, at 9.

153. *Id.* at 11.

154. *Id.* at 111–13.

155. *See* McHugh, *supra* note 119 (“Most shockingly, their suicide mortality rose almost 20-fold above the comparable nontransgender population. This disturbing result has as yet no explanation but probably reflects the growing sense of isolation reported by the aging transgendered after surgery. The high suicide rate certainly challenges the surgery prescription.”).

156. *See* Cecilia Dhejne et al., *Long-Term Follow-Up of Transsexual Persons Undergoing Sex Reassignment Surgery: Cohort Study in Sweden*, PLOS ONE, Feb. 2011, at 1, 1; McHugh, *supra* note 119.

157. Dhejne et al., *supra* note 156, at 7.

158. Cristan Williams, *Fact Check: Study Shows Transition Makes Trans People Suicidal*, TRANSADVOCATE (Nov. 2, 2015), [http://transadvocate.com/fact-check-study-shows-transition-makes-trans-people-suicidal\\_n\\_15483.htm](http://transadvocate.com/fact-check-study-shows-transition-makes-trans-people-suicidal_n_15483.htm) [<https://perma.cc/M9UD-LX3M>] (asking if the author was

improved the outlook for patients *in the absence* of surgery, media stories headlined McHugh's simplistic take-away: "[T]ransgender surgery isn't the solution."<sup>159</sup>

Ironically, in the *New Atlantis*, Mayer and McHugh concede there is evidence "that social stressors such as discrimination and stigma contribute to the elevated risk of poor mental health outcomes for non-heterosexual and transgender populations."<sup>160</sup> Obviously, these social stressors do not disappear once a person surgically or hormonally transitions. Those stressors may well contribute to the elevated risk of poor mental health outcomes even after transitioning. Yet, as to legislative responses, the pair concludes that "reducing social stressors . . . is unlikely to eliminate *all* of the disparities in mental health status between sexual minorities and the wider population."<sup>161</sup>

These claims have real world effects. They are cited with frequency in the media and by advocacy organizations.<sup>162</sup> New Hampshire State Representative J.R. Hoell relied on McHugh to argue against the passage of House Bill 478, which

aware that her findings were being "misrepresented," to which she answered, "Yes! It's very frustrating! I've even seen professors use my work to support ridiculous claims."

159. See, e.g., James A. Lyons, *Undermining the Military: Along with Budget Reduction, the Armed Forces Must Endure Social Engineering*, WASH. TIMES, July 29, 2015, <http://www.washingtontimes.com/news/2015/jul/29/james-lyons-military-undermined-by-budget-reduction> [https://perma.cc/FC3S-8ZXY]; Casey Bennett, *The Case Against Normalizing Gender Dysphoria*, LIBERTARIAN REPUBLIC (Oct. 5, 2015), <https://thelibertarianrepublic.com/the-case-against-normalizing-gender-dysphoria> [https://web.archive.org/web/20171223092559/https://thelibertarianrepublic.com/the-case-against-normalizing-gender-dysphoria/]; Bill Donohue, *Let's Have an Honest Discussion About Bruce Jenner*, NEWSMAX (June 3, 2015), <http://www.newsmax.com/billdonohue/discussion-jenner-sex-change-transgender/2015/06/03/id/648504> [https://perma.cc/H33U-AASN]; Rod Dreher, *Transgender Babies: The New Civil Rights Frontier*, AM. CONSERVATIVE (June 27, 2014), <http://www.theamericanconservative.com/dreher/transgender-babies-the-new-civil-rights-frontier> [https://perma.cc/RT46-N87M]; David Edwards, *Fox 'Psychology Expert': Only 'Science Deniers' Believe Sex Reassignment Surgery Works for Transgender People*, RAW STORY (Oct. 25, 2015), <http://www.rawstory.com/2015/10/fox-psychology-expert-only-science-deniers-believe-sex-reassignment-surgery-works-for-transgender-people> [https://perma.cc/J63K-MD3U]; Dustin Siggins, *Former Johns Hopkins Head Psychiatrist: 'Transgender Surgery Isn't the Solution'*, LIFESITENEWS.COM (June 17, 2014), <http://www.lifesitenews.com/news/former-johns-hopkins-head-psychiatrist-transgender-surgery-isnt-the-solutio> [https://perma.cc/4WA6-NDRR].

160. MAYER & MCHUGH, *supra* note 11, at 8.

161. *Id.* at 85 (emphasis added).

162. See e.g., Michael W. Chapman, *Johns Hopkins Psychiatrist: Transgender Is 'Mental Disorder'; Sex Change 'Biologically Impossible'*, CNSNEWS.COM (June 2, 2015), <http://www.cnsnews.com/news/article/michael-w-chapman/johns-hopkins-psychiatrist-transgender-mental-disorder-sex-change> [https://perma.cc/NH6E-N2JU]; Paige Winfield Cunningham, *Prominent Psychiatrist: Gay, Transgender Identity Isn't Innate*, WASH. EXAMINER (Aug. 22, 2016), <http://www.washingtonexaminer.com/prominent-psychiatrist-gay-transgender-identity-isnt-innate/article/2599764> [https://perma.cc/Y9WT-3M8U]; *Gender Ideology Harms Children*, AM. C. OF PEDIATRICIANS, <https://www.acped.org/the-college-speaks/position-statements/gender-ideology-harms-children> [https://perma.cc/JZA4-6G9U] (last updated Sept. 2017) (presenting statement signed by McHugh and others on website of organization whose statement of "core values" includes "sexual abstinence until marriage"); John Stonestreet & Stan Guthrie, *Opposing the Transgender Craze: How to Become a Scientific Heretic*, BREAKPOINT (June 5, 2017), <http://www.breakpoint.org/2017/06/breakpoint-opposing-the-transgender-craze> [http://www.breakpoint.org/2017/06/breakpoint-opposing-the-transgender-craze].

would have allowed trans individuals access to the bathroom that matches their gender identity.<sup>163</sup> He quoted McHugh to say, “[T]ransgenderism is ‘a mental disorder . . . that can lead to grim psychological outcomes.’ Dr. McHugh observed that “‘sex change’ is biologically impossible’ and ‘claiming that this is a civil-rights matter . . . is in reality to collaborate with and promote a mental disorder.’”<sup>164</sup> That bill failed.<sup>165</sup>

Perhaps most controversial is the pair’s discussion of children and gender dysphoria. The DSM-V contains this statement: “For clinic-referred children, onset of cross-gender behaviors is usually between ages 2 and 4 years. This corresponds to the developmental time period in which most typically developing children begin expressing gendered behaviors and interests.”<sup>166</sup>

The American Psychiatric Association acknowledges that “[g]ender atypical behavior is common among young children and may be part of normal development,” and, more important, that “[c]hildren . . . may or may not continue to experience it into adolescence and adulthood.”<sup>167</sup>

Mayer and McHugh vigorously dispute “[t]he notion that a two-year-old, having expressed thoughts or behaviors identified with the opposite sex, can be labeled *for life* as transgender,” saying that this view “has absolutely *no support* in science.”<sup>168</sup> They contend that “it is iniquitous to believe that *all* children who have gender-atypical thoughts or behavior at some point in their development, particularly before puberty, *should be encouraged* to become transgender.”<sup>169</sup> They cite no authority for the proposition that *all* such children are being *encouraged* to be trans.

In fact, it is unclear that anyone is *encouraging all* children with gender-atypical thoughts to be transgender. Here, McHugh’s observations in his own voice are illuminating. He likened support for trans children to humoring anorexic children about their perceptions of being overweight.<sup>170</sup> Trans persons, McHugh said, “assume” that their true gender is different from their body’s “physical reality.”<sup>171</sup> Crediting that “assumption,” he says, is like crediting the belief of a “dangerously

163. See Hoell, *supra* note 14.

164. *Id.*

165. See John DiStaso, *NH House Votes Twice to Table Bill Protecting Transgender Rights*, WMUR9, <http://www.wmur.com/article/nh-house-votes-to-table-bill-concerning-transgender-rights/9112488> [<https://perma.cc/D5X8-X39A>] (last updated Mar. 9, 2017, 7:12 PM).

166. AM. PSYCHIATRIC ASS’N, *DIAGNOSTIC AND STATISTICAL MANUAL OF MENTAL DISORDERS* 455 (5th ed. 2013).

167. *What Is Gender Dysphoria?*, *supra* note 78 (further stating that “[s]ome research shows that children who had more intense symptoms and distress, who were more persistent, insistent and consistent in their cross-gender statements and behaviors, and who used more declarative statements (‘I am a boy (or girl)’ rather than ‘I want to be a boy (or girl)’) were more likely to become transgender adults.”).

168. MAYER & MCHUGH, *supra* note 11, at 9 (emphasis added).

169. *Id.* at 9 (emphasis added).

170. See McHugh, *supra* note 119; Chapman, *supra* note 162.

171. See Chapman, *supra* note 162.



thin” person suffering anorexia, who thinks they are “overweight.”<sup>172</sup> McHugh extends the analogy: supporting a child’s decision to transition, he says, “is child abuse. It’s like performing liposuction on an anorexic child.”<sup>173</sup> As Part V notes, parents can support children through what is for many normal development and what will be for some small fraction a fixed identification with a different gender.<sup>174</sup> This support can take a number of forms short of surgery. Before turning to the support that may be given to trans children, it is helpful to review the scientific literature underpinning the controversy.

#### IV. THE LIMITS OF SCIENCE

Whether a biological basis underpins cross-gender identification is not nearly as important as how society responds to the difficulties faced by trans persons. Still, the outlines of our nascent scientific understanding may be illuminating about how little can be said definitively in any direction.

While the science regarding cross-gender identification is embryonic,<sup>175</sup> two explanatory theories have gained traction in the scientific community: (1) anatomical differences in the brain; and (2) pre- and post-natal hormone exposure. Some believe cross-gender identification rests on a combination of the two.<sup>176</sup> This Part briefly canvasses some of the findings in this burgeoning literature.

##### *A. Brain Anatomy*

Although few people likely have given much thought to the idea, there are sexually dimorphic parts of the brain—meaning, across large groups of males and females, some parts of the brain exhibit structural differences.<sup>177</sup> Differences occur

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172. *See id.*

173. Perry Chiramonte, *Controversial Therapy for Pre-Teen Transgender Patient Raises Questions*, FOX NEWS (Oct. 17, 2011), <http://www.foxnews.com/us/2011/10/17/controversial-therapy-for-young-transgender-patients-raises-questions.html> [<https://web.archive.org/web/20180610200639/http://www.foxnews.com/us/2011/10/17/controversial-therapy-for-young-transgender-patients-raises-questions.html>].

174. *See infra* Part V.

175. Smith et al., *supra* note 127.

176. *See* Melissa Hines et al., *Early Androgen Exposure and Human Gender Development*, 6 *BIOLOGY SEX DIFFERENCES* 1 (2015) (discussing research relating to hormones); Smith et al., *supra* note 127 (focusing on the research relating to the brain).

177. Sven Mueller et al., *A Structural Magnetic Resonance Imaging Study in Transgender Persons on Cross-Sex Hormone Therapy*, 105 *NEUROENDOCRINOLOGY* 123, 128 (2017).

in absolute brain volume,<sup>178</sup> amount of white matter,<sup>179</sup> amount of grey matter,<sup>180</sup> cortical thickness,<sup>181</sup> and the hypothalamus,<sup>182</sup> among others.

Researchers have examined the brains of trans individuals. The question driving researchers is whether these anatomical structures in subjects' brains more closely resemble the brains of persons matching their gender identity or the sex assigned at birth. Neuroanatomy studies have shown mixed results.<sup>183</sup>

Differences vary by gender identity. For instance, one study of white matter fibre tracts compared the brains of trans individuals with their natal counterparts.<sup>184</sup> White matter fibres are believed to conduct, process, and send nerve signals up and down the spinal cord.<sup>185</sup> In male-to-female ("MtF") individuals, the structures differed from both natal males and natal females.<sup>186</sup> The MtF individuals fell between both groups.<sup>187</sup> By contrast, female-to-male ("FtM") individuals were more similar to natal males.<sup>188</sup>

Other studies have focused on grey matter, which is important for passing sensory information to the brain.<sup>189</sup> One study found that the grey matter of MtF individuals was consistent with their birth sex, except as to the putamen, which more closely resembled natal females.<sup>190</sup> The putamen is thought to regulate movement and learning.<sup>191</sup>

178. Smith et al., *supra* note 127, at 253; *see also* Eileen Lüders et al., *Brain Size and Grey Matter Volume in the Healthy Human Brain*, 13 NEUROREPORT 2371, 2371 (2002); Amber N.V. Ruigrok et al., *A Meta-Analysis of Sex Differences in Human Brain Structure*, 39 NEUROSCIENCE BIOBEHAVIORAL REVS. 34, 34 (2014).

179. Smith et al., *supra* note 127, at 253; *see also* Kelly P. Cosgrove et al., *Evolving Knowledge of Sex Differences in Brain Structure, Function, and Chemistry*, 62 BIOLOGICAL PSYCHIATRY 847 (2007); Lüders et al., *supra* note 178, at 2371.

180. Smith et al., *supra* note 127, at 253.

181. *Id.* at 255.

182. *See* Alicia Garcia-Falgueras & Dick F. Swaab, *A Sex Difference in the Hypothalamic Uncinate Nucleus: Relationship to Gender Identity*, 131 BRAIN 3132, 3132 (2008); Giuseppina Rametti et al., *White Matter Microstructure in Female to Male Transsexuals Before Cross-Sex Hormonal Treatment. A Diffusion Tensor Imaging Study*, 45 J. PSYCHIATRIC RES. 199, 199 (2011).

183. *See* Smith et al., *supra* note 127, at 255 ("Unfortunately, the studies on structural characteristics of the transsexual subjects' brains also yielded conflicting results, which are in many cases difficult to interpret and compare due to potential confounds of hormone replacement therapy and sexual orientation.").

184. Including superior longitudinal fasciculus, inferior fronto-occipital fasciculus, cingulum, forceps minor, and corticospinal tract. *Id.* at 254.

185. Zawn Villines, *Gray Matter vs. White Matter in the Brain*, SPINAL.COM (Sept. 17, 2015), <http://www.spinalcord.com/blog/gray-matter-vs-white-matter-in-the-brain> [<https://perma.cc/L24F-R8B2>].

186. Rametti et al., *supra* note 182, at 201–02.

187. *Id.*

188. *Id.*

189. Villines, *supra* note 185.

190. Eileen Lüders et al., *Regional Gray Matter Variation in Male-to-Female Transsexualism*, 46 NEUROIMAGE 904, 906 (2009); Smith et al., *supra* note 127, at 254.

191. Derek Smith et al., *Putamen*, RADIOPAEDIA, <https://radiopaedia.org/articles/putamen> [<https://perma.cc/RCS3-XQRD>] (last visited July 14, 2018).

Other studies have found “no sex-atypical features with signs of ‘feminization’” of the putamen.<sup>192</sup> But, researchers noted “significant volume reductions of the thalamus and putamen” in MtF individuals.<sup>193</sup> The thalamus is believed to be central to relaying information to the brain from peripheral parts of the body.<sup>194</sup>

One study of neuron volume of the central subdivision of the bed nucleus of the stria terminalis (“BSTc”) of the hypothalamus, which is believed to be “essential for sexual behavior,”<sup>195</sup> examined the brains of seven trans individuals post-mortem.<sup>196</sup> The study found that “BSTc neuron volume matched that of [the trans individual’s] opposite birth-assigned sex.”<sup>197</sup> Still other studies have found no differences until adulthood, calling into question whether observed differences were due to hormone treatment or other outside causes.<sup>198</sup>

The handful of findings make it difficult to draw many conclusions other than that brain science is still developing. As Smith and colleagues observed in 2015, “In transsexualism, . . . two structures seem to have developed in a sex-atypical way, with size and neuron number closer to the desired than to the natal sex.”<sup>199</sup> While observed differences occurred in MtF transsexuals—which more closely “resemble[d] that of control females”—and “sex reversal also seems to occur in FtM transsexuals, . . . up to now, data is only available for two individuals.”<sup>200</sup> These researchers note that due to difficulties arising from conflicting results and study limitations, “it is not possible to define a neuroanatomical marker for transsexualism.”<sup>201</sup>

### B. Hormones

During pregnancy, the fetus is exposed to various hormones—principally androgens (i.e., testosterone, and estrogens). When androgens are present, the brain develops “in the male direction” and when they are absent, “in the female

192. Ivanka Savic & Stefan Arver, *Sex Dimorphism of the Brain in Male-to-Female Transsexuals*, 21 CEREBRAL CORTEX 2525, 2530 (2011); Smith et al., *supra* note 127, at 254.

193. Savic & Arver, *supra* note 192; Smith et al., *supra* note 127, at 254.

194. *Thalamus*, PUBMED HEALTH, <https://www.ncbi.nlm.nih.gov/pubmedhealth/PMHT0024746/> [<https://perma.cc/3BUF-LGFU>] (last visited July 14, 2018).

195. Jiang-Ning Zhou et al., *A Sex Difference in the Human Brain and Its Relation to Transsexuality*, 378 NATURE 68, 68 (1995).

196. Jaimie F. Veale et al., *Biological and Psychosocial Correlates of Adult Gender-Variant Identities: A Review*, 48 PERSONALITY INDIVIDUAL DIFFERENCES 357, 360 (2010); *see also* Zhou et al., *supra* note 195.

197. Veale et al., *supra* note 196; *see also* Kruijver et al., *Male-to-Female Transsexuals Have Female Neuron Numbers in a Limbic Nucleus*, 85 J. CLINICAL ENDOCRINOLOGY METABOLISM 2034, 2034 (2000); Zhou et al., *supra* note 195.

198. *But see* Wilson C.J. Chung et al., *Sexual Differentiation of the Bed Nucleus of the Stria Terminalis in Humans May Extend into Adulthood*, 22 J. NEUROSCIENCE 1027, 1027 (2002).

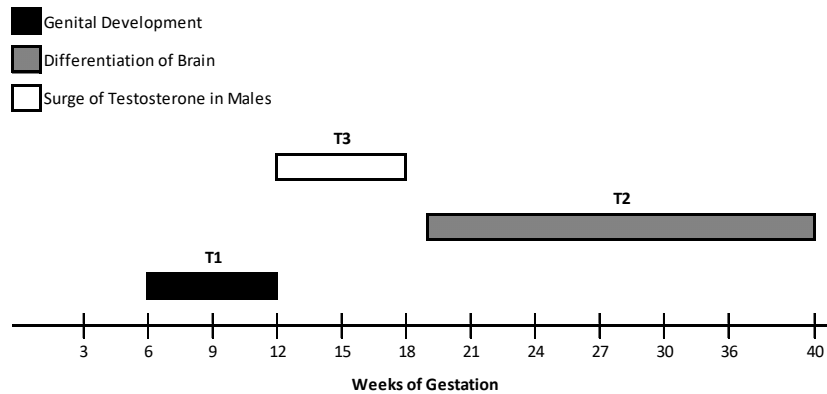
199. Smith et al., *supra* note 127, at 254.

200. *Id.*

201. *Id.* at 255 (“By all means, a direct link between grey matter volume changes and aspects of transsexualism cannot be established so far . . .”).

direction.”<sup>202</sup> In a typical pregnancy, a male fetus is exposed to androgens during weeks eight through twenty-four of gestation<sup>203</sup> and again postnatally.<sup>204</sup>

Figure 1.<sup>205</sup>



As Figure 1 shows graphically, during pregnancy the fetal brain becomes sexually differentiated at one time, while the sexual organs differentiate at another.<sup>206</sup> The sexual organs differentiate between weeks six and twelve of pregnancy, shown as T1 in Figure 1.<sup>207</sup> Sexual differentiation of the brain begins in the second half of pregnancy, shown as T2.<sup>208</sup>

In the sixth week of pregnancy, T1, the ovaries and testicles develop.<sup>209</sup> In a male fetus, the testes begin producing testosterone, influencing the sexual differentiation of the sex organs.<sup>210</sup> The body converts testosterone into dihydrotestosterone, which helps to form the penis, prostate, and scrotum.<sup>211</sup> In females, the sexual organs differentiate based on the absence of androgens.<sup>212</sup>

202. Dick F. Swaab & Alicia Garcia-Falgueras, *Sexual Differentiation of the Human Brain in Relation to Gender Identity and Sexual Orientation*, 24 *FUNCTIONAL NEUROLOGY* 17, 17 (2009).

203. Hines et al., *supra* note 176, at 5.

204. *Id.* at 7.

205. Hines et al., *supra* note 176; Ivanka Savic et al., *Sexual Differentiation of the Human Brain in Relation to Gender Identity and Sexual Orientation*, 186 *PROGRESS BRAIN RES.* 41, 43 (2010); Swaab & Garcia-Falgueras, *supra* note 202.

206. Ai-Min Bao & Dick F. Swaab, *Sexual Differentiation of the Human Brain: Relation to Gender Identity, Sexual Orientation and Neuropsychiatric Disorders*, 32 *FRONTIERS NEUROENDOCRINOLOGY* 214, 215 (2011); Smith et al., *supra* note 127, at 253.

207. Swaab & Garcia-Falgueras, *supra* note 202.

208. Savic et al., *supra* note 205.

209. *Id.*

210. *Id.*

211. *Id.*

212. *Id.*

The brain develops under the “influence[] [of] sex hormones such as testosterone, estrogens and progesterone.”<sup>213</sup> Testosterone levels may even “act on developing neurons” during pregnancy.<sup>214</sup> Male and female children have different distributions of steroid receptors in the brain.<sup>215</sup> Notably, male and female children are exposed to significantly different levels of hormones during pregnancy.<sup>216</sup> Males have elevated levels of testosterone at two stages: weeks twelve through eighteen, T3 in Figure 1, and again in the first three months after birth.<sup>217</sup> In females, there is a surge of estrogen during the first three months after birth.<sup>218</sup>

In some instances, a fetus is exposed to elevated levels of androgens due to external forces. This can occur because of conditions affecting the mother or conditions affecting the child.

Consider mothers first. During pregnancy women may be prescribed hormones or drugs that affect their hormones. In the past, doctors prescribed expecting mothers diethylstilbestrol (“DES”), a synthetic estrogen then thought to decrease the likelihood of miscarriage.<sup>219</sup> At the time, health care providers believed miscarriages were caused by low levels of estrogen.<sup>220</sup> DES is no longer prescribed to expecting mothers; the drug has been associated with certain vaginal and breast cancers in women, as well as lasting effects on children exposed to DES in utero.<sup>221</sup> The children “were more likely to have problems in their reproductive systems.”<sup>222</sup> Studies have linked DES to genital malformation and some intersex conditions in children.<sup>223</sup>

Certain genetic conditions affecting fetuses can introduce atypical levels of hormones, too. In these circumstances, the fetus receives a different amount of androgens than the fetus otherwise would have. For instance, some forms of congenital adrenal hyperplasia (“CAH”), a group of conditions in which a person

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213. Swaab & Garcia-Falgueras, *supra* note 202, at 18.

214. *Id.* at 17.

215. *Id.*

216. *Id.* at 18.

217. During weeks thirty-four through forty-one of pregnancy, males have ten times more testosterone than females. *Id.*

218. *Id.*

219. *About DES*, CTRS. DISEASE CONTROL & PREVENTION, <https://www.cdc.gov/des/consumers/about/index.html> [<https://perma.cc/H3TE-C2BK>] (last visited July 14, 2018); *DES Exposure: Questions and Answers*, AM. CANCER SOC'Y, <https://www.cancer.org/cancer/cancer-causes/medical-treatments/des-exposure.html> [<https://perma.cc/9D49-ZXK2>] (last updated June 10, 2015).

220. *DES Exposure: Questions and Answers*, *supra* note 219.

221. *Id.*

222. *Id.*

223. E. Hemminki et al., *Exposure to Female Hormone Drugs During Pregnancy: Effect on Malformations and Cancer*, 80 BRIT. J. CANCER 1092, 1095 (1998); Ernie Hood, *Are EDCs Blurring Issues of Gender?*, 113 ENVTL. HEALTH PERSP. A671, A673–A674 (2005); Scott P. Kerlin, *The Presence of Gender Dysphoria, Transsexualism, and Disorders of Sexual Differentiation in Males Prenatally Exposed to Diethylstilbestrol: Initial Evidence from a 5-Year Study*, TRANSADVOCATE, <http://www.antijen.org/transadvocate/id33.html> [<https://perma.cc/F62H-QV7E>] (last updated July 9, 2005).

lacks an enzyme needed by the adrenal glands,<sup>224</sup> can spike fetal androgen levels.<sup>225</sup> CAH can affect one or more of three steroid hormones: cortisol, mineralocorticoids, and androgens.<sup>226</sup> Some forms of CAH result in insufficient production of cortisol, which can lead to an overproduction of androgens.<sup>227</sup> Some studies suggest an increase in rates of being trans among natal females with CAH.<sup>228</sup>

Some theorize that abnormal levels of hormones during development may lead to a child cross-gender identifying.<sup>229</sup> Mothers prescribed androgenic progestins, which increase testosterone exposure to the fetus, had children with “increased male-typical play,” while mothers prescribed anti-androgenic hormones had children with reduced “male-typical play.”<sup>230</sup> Additionally, epileptic women sometimes take phenobarbital or diphantoin.<sup>231</sup> These drugs “change the metabolism of the sex hormones and can act on the sexual differentiation of the child’s brain.”<sup>232</sup>

Studies have also focused on the ratio of the length of the second and fourth fingers<sup>233</sup> as an indicator for prenatal testosterone exposure.<sup>234</sup> Generally, this 2D:4D ratio—that is the length of the second and fourth fingers—in females is greater than it is in males.<sup>235</sup> Studies of MtF individuals have found a ratio

224. *Congenital Adrenal Hyperplasia*, MAYO CLINIC (Aug. 11, 2017), <http://www.mayoclinic.org/diseases-conditions/congenital-adrenal-hyperplasia/home/ovc-20309076> [<https://perma.cc/R9PM-2BV4>] (“A person with CAH lacks one of the enzymes the adrenal glands use to produce hormones that help regulate metabolism, the immune system, blood pressure, and other essential functions.”).

225. Bonnie Auyeung et al., *Fetal Testosterone Predicts Sexually Differentiated Childhood Behavior in Girls and in Boys*, 20 PSYCHOL. SCI. 144, 144 (2009) (describing congenital adrenal hyperplasia (CAH) as “a genetic disorder that causes excess adrenal androgen production beginning prenatally”).

226. *Congenital Adrenal Hyperplasia*, *supra* note 224 (noting that “cortisol[] regulates your body’s response to illness or stress; mineralocorticoids . . . regulate sodium and potassium levels; [and] androgens . . . are sex hormones.”).

227. *Id.*

228. Swaab & Garcia-Falgueras, *supra* note 202, at 21 (“A girl with congenital adrenal hyperplasia (CAH), who has been exposed to extreme levels of testosterone in utero, will also have an increased chance of becoming transsexual. Although the likelihood of transsexuality developing in such cases is 300–1000 greater than normal, the risk for transsexuality in CAH is still only 1–3% (Zucker et al., 1996), whereas the probability of serious gender problems is 5.2% (Dessens et al., 2005).”).

229. *Id.* (“A girl with congenital adrenal hyperplasia (CAH), who has been exposed to extreme levels of testosterone in utero, will also have an increased chance of becoming transsexual. Although the likelihood of transsexuality developing in such cases is 300–1000 greater than normal, the risk for transsexuality in CAH is still only 1–3% (Zucker et al., 1996), whereas the probability of serious gender problems is 5.2% (Dessens et al., 2005).”).

230. Hines et al., *supra* note 176, at 1, 4, 5.

231. Swaab & Garcia-Falgueras, *supra* note 202; *see also* Arianne Dessens et al., *Prenatal Exposure to Anticonvulsants and Psychosexual Development*, 28 ARCHIVES SEXUAL BEHAV. 31, 32 (1999). Authorities caution that “this drug should be used during pregnancy only if the benefit outweighs the risk to the fetus.” *Phenobarbital Pregnancy and Breastfeeding Warnings*, DRUGS.COM, <https://www.drugs.com/pregnancy/phenobarbital.html> [<https://perma.cc/63L2-9AJY>] (last visited July 14, 2018).

232. Swaab & Garcia-Falgueras, *supra* note 202, at 17, 21.

233. Veale et al., *supra* note 196, at 359; *see also* Daphna Stroumsa, *The State of Transgender Health Care: Policy, Law, and Medical Frameworks*, 104 AM. J. PUB. HEALTH e31, e31 (2014).

234. Smith et al., *supra* note 127, at 253; Veale et al., *supra* note 196, at 359.

235. Veale et al., *supra* note 196, at 359.

comparable to natal females.<sup>236</sup> Other studies have looked at non-right handedness as an indicator of elevated prenatal androgen exposure.<sup>237</sup> Transgender individuals are more likely than the general population to be left-handed.<sup>238</sup>

While existing science cannot definitively unpack all of these possible influences, science often is unable to pinpoint the exact cause of many phenomena. Where our scientific understanding ends, compassion should pick up.

#### V. CONCERN FOR PUBLIC HEALTH SHOULD BE PARAMOUNT

Whatever the cause of cross-gender identification, many people who experience this are struggling. Trans persons report elevated levels of stress, and sometimes psychological distress.<sup>239</sup> A national study conducted in 2013 found that of the 1,093 transgender persons who participated, 44.1% had clinical depression and 33.2% had anxiety.<sup>240</sup> Forty-two percent of transgender youth have a history of self-injury.<sup>241</sup> LGBT youth report facing significant bullying, with the worst rates for trans youth.<sup>242</sup>

Most concerning, the suicide attempt rates for trans individuals have been reported to be as high as 41%—significantly outstripping the general population, which historically have hovered around 5%.<sup>243</sup> Other studies place the rate of attempted suicide among trans youth at roughly one in three teens.<sup>244</sup> Even at the lower end of estimates, the fact of the matter is that we are dealing with a public health crisis.

236. Smith et al., *supra* note 127, at 253.

237. Veale et al., *supra* note 196, at 362.

238. Veale et al., *supra* note 196, at 362; *see also* Jacob F. Orlebeke et al., *Elevated Sinistrality in Transsexuals*, 6 NEUROPSYCHOLOGY 351 (1992); Diane B. Watson & Stanley Coren, *Left-Handedness in Male-to-Female Transsexuals*, 267 JAMA 1342 (1992).

239. Walter O. Bockting et al., *Stigma, Mental Health, and Resilience in an Online Sample of the US Transgender Population*, 103 AM. J. PUB. HEALTH 943, 946 (2013).

240. *Id.*

241. *High Rates of Suicide and Self-Harm Among Transgender Youth*, SCIENCEDAILY (Aug. 31, 2016), <https://www.sciencedaily.com/releases/2016/08/160831110833.htm> [<https://perma.cc/6UBY-Y2ZV>]; *see also* Clay Routledge, *The Campus Left vs. The Mentally Ill*, WALL ST. J., Sept. 13, 2017, [https://www.wsj.com/articles/the-campus-left-vs-the-mentally-ill-1505343051?shareToken=st8b10bc46d2c14954be6951075e15ad91&reflink=article\\_email\\_share](https://www.wsj.com/articles/the-campus-left-vs-the-mentally-ill-1505343051?shareToken=st8b10bc46d2c14954be6951075e15ad91&reflink=article_email_share) (noting suicide is the second leading cause of death among Americans between fifteen and thirty-four years old).

242. *See* Stewart L. Adelson et al., *Development and Mental Health of Lesbian, Gay, Bisexual, or Transgender Youth in Pediatric Practice*, 63 PEDIATRIC CLINICS N. AM. 971 (2016); Valerie A. Earnshaw et al., *Bullying Among Lesbian, Gay, Bisexual, and Transgender Youth*, 63 PEDIATRIC CLINICS N. AM. 999 (2016); Brian S. Mustanski et al., *Mental Health Disorders, Psychological Distress, and Suicidality in a Diverse Sample of Lesbian, Gay, Bisexual, and Transgender Youths*, 100 AM. J. PUB. HEALTH 2426 (2010); Lisa C. Barrios, *School Bullying and Lesbian, Gay, Bisexual, and Transgender Students*, STOPBULLYING.GOV (Oct. 17, 2016), <https://www.stopbullying.gov/blog/2016/10/17/school-bullying-and-lesbian-gay-and-bisexual-high-school-students.html> [<https://perma.cc/JF5F-6QUC>] (“While nationally representative data are not yet available based on gender identity, we know that transgender youth often suffer even higher levels of bullying and violence than their non-transgender peers.”).

243. Haas et al., *supra* note 21 (giving statistics and reporting a 4.6% attempted suicide rate for the general population); *see also* Ungar, *supra* note 21.

244. *High Rates of Suicide and Self-Harm Among Transgender Youth*, *supra* note 241.

Historically, access to health care for trans individuals, including mental health services, has been frustrated by a lack of insurance coverage.<sup>245</sup> Nearly half of physicians report a lack of reimbursement for “transgender-related medical visits and treatment.”<sup>246</sup> Importantly, the ACA extended bans on discrimination on the basis of sex, among other characteristics, to federally-funded or administered health programs and activities, as well as to health insurance marketplaces and plans sold through them.<sup>247</sup> During the Obama Administration, the Department of Health and Human Services promulgated regulations under the ACA that explicitly extended the ban on sex discrimination to encompass sexual orientation and gender identity discrimination too.<sup>248</sup>

In December of 2016, the U.S. District Court for the Northern District of Texas enjoined those regulations nationally.<sup>249</sup> Suits over denial of gender reassignment and other procedures to trans persons continue to be pressed in the courts under the ACA itself, rather than the now-enjoined regulations.<sup>250</sup>

As noted above, new policies in the Trump Administration may frustrate access to services.<sup>251</sup> Importantly, federal courts are split on whether sex discrimination bans in hiring and education bar gender identity discrimination too.<sup>252</sup> Notably, one day after Attorney General Jeff Sessions was sworn in, the Department of Justice filed a motion in a case pending in the U.S. Court of Appeals for the Fifth Circuit.<sup>253</sup> This filing withdrew an Obama-era motion to limit a temporary injunction that blocked guidance which gave transgender students’ access to the bathroom of their choice, so the withdrawal left the injunction unchallenged and operative.<sup>254</sup> Together, these developments place a cloud over access to services by the trans community, although whether they block access to needed care remains to be seen.<sup>255</sup>

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245. See *Promoting Transgender and Gender Minority Health Through Inclusive Policies and Practices*, AM. PUB. HEALTH ASS’N (Nov. 1, 2016), <https://www.apha.org/policies-and-advocacy/public-health-policy-statements/policy-database/2017/01/26/promoting-transgender-and-gender-minority-health-through-inclusive-policies-and-practices> [https://perma.cc/L6PK-PUFD].

246. Vance Jr. et al., *supra* note 107, at 251.

247. Patient Protection and Affordable Care Act § 1557, 42 U.S.C. § 18116 (2012).

248. 45 C.F.R. § 92.4 (2016).

249. *Franciscan All., Inc. v. Burwell*, 277 F. Supp. 3d 660 (N.D. Tex. 2016).

250. See, e.g., Patrick Dorrian, *Worker Sues PeaceHealth for Not Covering Transgender Son’s Care*, BLOOMBERG BNA, Oct. 12, 2017 (discussing a lawsuit filed in Washington under Section 1557, as well as a lawsuit filed in Wisconsin under that provision).

251. See *supra* Part I.

252. See generally Robin Fretwell Wilson, *Squaring Faith and Sexuality: Religious Institutions and the Unique Challenge of Sports*, 34 LAW & INEQ. 385 (2016).

253. Defendants-Appellants’ Notice of Withdrawal of Motion for Partial Stay Pending Appeal and Joint Motion to Cancel Oral Argument, *Texas v. United States*, No. 16-11534 (5th Cir. Feb. 10, 2017); *US Withdraws Stay Request in Texas Transgender Bathroom Case*, VOICE AM. (Feb. 11, 2017, 7:32 PM), <https://www.voanews.com/a/us-withdraws-stay-request-in-texas-transgender-bathroom-case/3719898.html> [https://perma.cc/EU6A-85Q7].

254. *Id.*

255. See *infra* note 262 (chronicling humiliating encounter by trans patient followed by care from another, more sensitive provider).



A lack of visibility may contribute to the negative experiences of transgender individuals.<sup>256</sup> A 2015 study commissioned by GLAAD found that only 16% of Americans report knowing or having worked with someone who is transgender.<sup>257</sup> While this number increased from 8% to 16% in the space of seven years,<sup>258</sup> few Americans know a trans person or are aware that they do.

Physicians and health care providers are no exception. A survey administered to members of the Society for Adolescent Health and Medicine and the Pediatric Endocrine Society found that only 47.1% of responding doctors felt confident in their ability to provide care for transgender youth.<sup>259</sup>

Access to health care for trans individuals has been complicated by doctors' lack of clinical training in care for this community.<sup>260</sup> Transgender individuals often feel discomfort even when simply visiting the doctor's office; some report receiving suboptimal care.<sup>261</sup> For instance, one patient reported being denied care when presenting to the emergency room for a broken limb.<sup>262</sup> During the procedure, the health care provider became aware that the patient was trans and "walked out in a huff," refusing to provide care.<sup>263</sup> Ultimately, that patient received care from a different provider.<sup>264</sup> Some researchers urge enhanced training for doctors in transgender-specific care.<sup>265</sup>

How much of the stress experienced by trans persons is tied up with stigma itself is hard to tease out. In a study of 191 transgender women, depression and anxiety were associated with transgender stigmatization.<sup>266</sup> The researchers used the nine-item Everyday Discrimination Scale to identify stigmatization.<sup>267</sup> Depression was measured using the twenty-item Center for Epidemiologic Studies Depression

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256. See generally Wilson, *supra* note 26.

257. *Number of Americans Who Report Knowing a Transgender Person Doubles in Seven Years, According to New GLAAD Survey*, GLAAD (Sept. 17, 2015), <https://www.glaad.org/releases/number-americans-who-report-knowing-transgender-person-doubles-seven-years-according-new> [<https://perma.cc/4F93-KZ69>].

258. *Id.* (giving 2008 and 2015 figures).

259. Vance Jr. et al., *supra* note 107, at 251 (explaining the minority stress model); see also *Promoting Transgender and Gender Minority Health Through Inclusive Policies and Practices*, *supra* note 245.

260. Vance Jr. et al., *supra* note 107, at 251.

261. Stroumsa, *supra* note 233, at e31; Mary Emily O'Hara, 'Trans Broken Arm Syndrome' and the Way Our Healthcare System Fails Trans People, DAILY DOT (Aug. 6, 2015, 6:22 AM), <https://www.dailydot.com/irl/trans-broken-arm-syndrome-healthcare/> [<https://web.archive.org/web/20180714005148/https://www.dailydot.com/irl/trans-broken-arm-syndrome-healthcare/>].

262. Alison Reiheld, *Denying the Patient in Front of You: Recent Studies of Transgender Patients' Experiences in the ER Confirms Prior Results About Poor Treatment of Transgender Persons in Clinical Settings*, IJFAB BLOG (Mar. 14, 2014), <http://www.ijfab.org/blog/2014/03/denying-the-patient-in-front-of-you-recent-studies-of-transgender-patients-experiences-in-the-er-confirms-prior-results-about-poor-treatment-of-transgender-persons-in-clinical-settings/> [<https://perma.cc/P8C8-DHMB>].

263. *Id.*

264. *Id.*

265. Vance Jr. et al., *supra* note 108, at 425–26.

266. Mei-Fen Yang et al., *Stigmatization and Mental Health in a Diverse Sample of Transgender Women*, 2 LGBT HEALTH 306, 309–10 (2015).

267. *Id.* at 307.

Scale.<sup>268</sup> Anxiety was measured using the “anxiety sub-scale of the Brief Symptom Inventory.”<sup>269</sup> This study asked respondents questions like “How often do people act as if they are better than you because you are a transgender woman?” Forty-nine percent said they have had such an experience.<sup>270</sup>

Among the participants surveyed in a 2013 Massachusetts study, 65% reported difficulties in accessing public accommodations during the preceding twelve months.<sup>271</sup> Respondents reported access barriers in transportation, retail establishments, restaurants, public gatherings, and health care.<sup>272</sup> Researchers found that the risk for adverse emotional and physical symptoms increased from 31% to 81% among persons who reported an access barrier.<sup>273</sup> Many delayed seeking health care when “sick or injured” or in need of “preventive or routine health care.”<sup>274</sup> Massachusetts broadened its 1989 sexual orientation nondiscrimination law to encompass gender identity in July 2016.<sup>275</sup>

A classic public approach asks not just what factors increase the risk of a negative outcome, it asks what factors may be protective.<sup>276</sup> The one protective measure identified thus far is when parents support their child’s gender identity.<sup>277</sup> Mayer and McHugh elide the difficult choices facing families of trans children. “It is iniquitous,” they say, “to believe that all children who have gender-atypical thoughts or behavior at some point in their development, particularly before puberty, should be encouraged to become transgender.”<sup>278</sup>

Yet, children *can* have better outcomes if their parents support them. A 2016 study published in *Pediatrics* detailed this gender-affirming approach.<sup>279</sup> Mental health difficulties in transgender adults and adolescents, the researchers believe, are linked to “years of prejudice, discrimination, and stigma; conflict between one’s appearance and stated identity; and general rejection by people in their social environments, including their families.”<sup>280</sup> They cite “growing evidence that social support is linked to better mental health outcomes among transgender adolescents and adults.”<sup>281</sup> Previous research had focused primarily on adults and adolescents,

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268. *Id.*

269. *Id.*

270. *Id.* at 308.

271. Sari L. Reisner et al., *Legal Protections in Public Accommodations Settings: A Critical Public Health Issue for Transgender and Gender-Nonconforming People*, 93 *MILBANK Q.* 484, 485 (2015).

272. *Id.*

273. *Id.* at 485.

274. *Id.*

275. An Act Making It Unlawful to Discriminate on the Basis of Sexual Orientation, 1989 Mass. Acts 516; An Act Relative to Transgender Anti-Discrimination, S.735, 189th Gen. Ct. (Mass. 2016).

276. *See generally* Robin Fretwell Wilson, *Sexually Predatory Parents and the Children in Their Care: Remove the Threat, Not the Child*, in *HANDBOOK OF CHILDREN, CULTURE, AND VIOLENCE* (Nancy E. Dowd et al. eds., 2006).

277. Olson, *supra* note 113; *see also* Olson, *supra* note 111.

278. MAYER & MCHUGH, *supra* note 11, at 9.

279. Olson, *supra* note 113.

280. *Id.*

281. *Id.*

so this team examined the value for children of social transitioning, which they defined as:

a decision by a family to allow a child to begin to present, in all aspects of the child's life, with a gender presentation that aligns with the child's own sense of gender identity and that is the 'opposite' of the gender assumed at the child's birth. Social transitions involve changes in the child's appearance (e.g., hair, clothing), the pronoun used to refer to the child, and typically also a change in the child's name.<sup>282</sup>

The researchers utilized a "national, community sample" with rigid inclusion criteria<sup>283</sup> and two control groups,<sup>284</sup> one comprised of siblings of transgender children in the study and the other made up of children with no history of cross-gender behavior.<sup>285</sup> The researchers focused on internalizing symptoms rather than externalizing symptoms.<sup>286</sup> Internalizing symptoms refer to things such as anxiety and depression.<sup>287</sup>

"Socially transitioned, prepubescent transgender children showed typical rates of depression and only slightly elevated rates of anxiety symptoms compared with population averages."<sup>288</sup> When transgender children were "supported in their identities," they "had internalizing symptoms that were well below even the preclinical range."<sup>289</sup> Compared to previous studies of children with gender dysphoria, socially transitioned children had "substantially lower rates of internalizing symptoms."<sup>290</sup> While this data cannot definitively say that socially transitioning will help *every* child whose gender identity is inconsistent with their natal sex,<sup>291</sup> it certainly suggests that socially transitioning operated to be protective of these children. Importantly, social transitioning does not prevent the supported child from resuming a natal gender identity at a later time, but supports the child now.

#### CONCLUSION

Despite the fact that we do not yet know what influences impact the identification with another gender, society faces a choice. It can beg off, claiming that because we do not completely understand the phenomenon, nothing can be done. Or it can act compassionately today towards trans persons, many of whom are struggling. Compassion should be the guiding consideration.

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282. *Id.* at 3.

283. *Id.*

284. *Id.* at 4.

285. *Id.*

286. *Id.* at 3.

287. *Id.* at 2.

288. *Id.* at 5.

289. *Id.*

290. *Id.* ("In particular, allowing children to present in everyday life as their gender identity rather than their natal sex is associated with developmentally normative levels of depression and anxiety.").

291. *Id.* at 5–6.