No. 18-107

In the
Supreme Court of the United States

R.G. & G.R. HARRIS FUNERAL HOMES, INC.,
Petitioner,
v.

EQUAL EMPLOYMENT OPPORTUNITY COMMISSION,
Respondent,
and AIMEE STEPHENS,
Respondent-Intervenor.

On Writ of Certiorari to the United States Court of Appeals for the Sixth Circuit

BRIEF OF NATIONAL MEDICAL AND POLICY GROUPS THAT STUDY SEX AND GENDER IDENTITY AS *AMICI CURIAE* IN SUPPORT OF EMPLOYERS

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INTERESTS OF THE *AMICI CURIAE*[1]

Amici curiae are national medical and policy groups well-versed in the issues surrounding sex and gender identity ideology. Based on their clinical and scientific expertise, *amici* believe the meaning of *sex* under federal law should not be expanded beyond biological sex to include gender constructs associated with transgender status. *Amici* believe biological sex provides an immutable and medically determinable method of categorizing persons based on gender. The constructs associated with transgender status are a subjective and unworkable means of categorization, and the courts are ill-equipped to redefine *sex* under federal law based on the dubious policy justifications asserted by Respondent Stephens and some *amici*.

A full listing of *amici* appears in the Appendix.

SUMMARY OF THE ARGUMENT

Amici agree with Petitioner and the Federal Respondent that Title VII's text ("because of … sex") refers to biological sex, which is an innate, immutable, binary reality—male and female—that is medically determined by a person's chromosomal constitution and reproductive capacities.

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[1] Under Rule 37.6, *amici curiae* affirm that no counsel for a party authored this brief in whole or in part and that no person other than *amici* and their counsel made a monetary contribution to the preparation or submission of this brief. The parties have consented to the filing of this brief.

Regardless of perceived gender status, a person biologically will always remain the male or female they were at conception. Thus, real and consequential biological differences between the sexes will have a lifelong bearing on that person's brain and organs, behavior, propensity for disease, cognitive and emotional processes, and responses to toxins and drugs.

Transgender advocates seek to expand *sex* to include a host of subjective criteria, such as gender identity, child-rearing, and social activities. Unlike biological sex, these ideological factors do not offer an objective means of classification, as demonstrated by "detransitioners"—those who opt to re-identify with their natal sex—and the fact that most prepubertal children with gender dysphoria desist from that dysphoria by adolescence or adulthood.

Further, those who seek to redefine *sex* assert policy justifications that avoid inconvenient truths. For instance, they rely on overinflated transgender suicide statistics to blame discrimination for high suicide rates—an argument that contradicts some data and ignores the connection between mental illness and suicide. This is especially troublesome because studies around the world have found a high prevalence of mental health comorbidities present with gender dysphoria.

In arguing to redefine *sex*, transgender advocates also fail to acknowledge the risks associated with the interventions they propose. For example, those seeking the early social transition of children with gender dysphoria have not sufficiently addressed the substantial stress that can later result. Worse, they

minimize the success of therapy on resolving gender dysphoria and instead support an increase in problematic gender affirmative "therapies."

One thorny gender intervention involves the use of experimental puberty-blocking hormones on children, which impair normal sexual function, decrease bone density, and may lead to emotional harm. Another gender intervention uses cross-sex hormones, such as testosterone and estrogen, which may cause sterility and other irreversible effects and create serious health risks, such as coronary artery disease, cerebrovascular disease, liver dysfunction, hypertension, and breast or uterine cancer.

Further, transgender advocates tout the claimed successes of sex reassignment surgeries, which do not actually change biological sex and often lead to medical complications. These gender affirmative therapies pose ethical problems for health professionals, especially in the matter of conscience protections and informed consent, considering the lifelong medical treatments and complications that accompany these interventions.

The high level of controversy, uncertainty, and potential negative repercussions associated with the dubious policy considerations offered to redefine *sex* demonstrate why this Court should not overstep proper judicial boundaries to expand federal law to include subjective gender constructs.

ARGUMENT[2]

Amici agree with Petitioner and the Federal Respondent that the text of Title VII of the Civil Rights Act of 1964, 42 U.S.C. 2000e-2(a)(1)—"because of … sex"—refers to biological sex, male and female.[3] This binary understanding already is reflected in this Court's references to sex in the context of Title VII.[4] Biological sex is a medically determinable and objective means of classification, unlike the subjective gender constructs associated with transgender status. Further, redefining *sex* is an unsuitable task for the courts, especially considering the debatable justifications asserted by Respondent Stephens [hereinafter "Respondent"] and some *amici* and the uncertain ramifications of expanding federal law in this way.

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[2] This brief draws some of its phrasing and supporting evidence from a letter sent to the Trump Administration by some of the *amici*. See *Petition to Uphold the Scientific Definition of Sex in Federal Law and Policy*, Dec. 4, 2018.

[3] See Pet. for Writ of Cert., p. 26, *R.G. & G.R. Harris Funeral Homes, Inc. v. E.E.O.C.*, 139 S. Ct. 1599 (2019); Br. for Fed. Respondent Supporting Reversal, pp. 19–20, *Harris*, 139 S. Ct. 1599. See also Pet. for Writ of Cert., p. 16, *Altitude Express, Inc. v. Zarda*, 139 S. Ct. 1599 (2019); *Hively v. Ivy Tech Comty. Coll.*, 853 F.3d 339, 362 (2017) (Sykes, J., dissenting) (same).

[4] See, e.g., *Oncale v. Sundowner Offshore Servs., Inc.*, 523 U.S. 75, 80 (1998) ("'The critical issue, Title VII's text indicates, is whether members of one sex are exposed to disadvantageous terms or conditions of employment to which members of the other sex are not exposed.'") (quoting *Harris v. Forklift Sys., Inc.*, 510 U.S. 17, 25 (1993) (Ginsburg, J., concurring)).

I. BIOLOGICAL SEX IS AN INNATE, MEDICALLY DETERMINABLE MEANS OF CLASSIFICATION, UNLIKE THE SUBJECTIVE GENDER CONSTRUCTS ASSOCIATED WITH TRANSGENDER STATUS.

Sex is a term based on objective, identifiable, innate, and immutable biology. The gender constructs associated with transgender status, in contrast, are not medically determinable or objectively reliable.

A. Biological Sex is Innate, Immutable, and Medically Determinable.

Medical science affirms that sex is innate and immutable—a binary, objective reality determined by a person's chromosomal constitution and clearly defined reproductive capacities. Contrary to the assertions of Respondent,[5] sex is not "assigned" at birth, but rather "declares itself anatomically *in utero* and is acknowledged at birth."[6] The genetic information directing development of male or female gonads and other primary sexual traits —normally encoded on chromosome pairs XY and XX— are present upon fertilization (i.e., at human conception).[7]

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[5] See, e.g., Br. for Respondent Aimee Stephens, pp. 20–21, *Harris,* 139 S. Ct. 1599 [hereinafter "Stephens Brief"].

[6] Michelle A. Cretella, *Gender Dysphoria in Children and Suppression of Debate*, 21 J. AM. PHYS. & SURGEONS 50 (2016).

[7] See Inst. of Med. (U.S.) Comm. on Understanding the Biology of Sex and Gender Differences, *Every Cell Has a Sex*, *in* EXPLORING THE BIOLOGICAL CONTRIBUTIONS TO HUMAN HEALTH: DOES SEX MATTER? (T.M. Wizemann & M.L. Pardue, eds., 2001) [hereinafter "Inst. of Med."]. See also Keith L. Moore, et al., THE DEVELOPING HUMAN: CLINICALLY ORIENTED EMBRYOLOGY 29 (10th ed. 2015).

Sex is a biological trait that distinguishes living things as being male or female, as determined by both genes found in the complement of sex chromosomes and by the presence of distinctive reproductive organs.[8] Humans, like all mammals, require two gametes to reproduce: ova produced by females and sperm produced by males.[9] The central underlying basis for sex, therefore, is the distinction between the reproductive roles of males and females, and there is no other widely accepted biological classification for the sexes.[10] But a person's sex extends to more than just the reproductive system. Sex permeates every cell that contains a nucleus, marking it with a sexual identity by its chromosomal constitution XX or XY.[11] Thus, a person—regardless of transgender status—biologically will always remain the male or female they were at conception.

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[8] See Inst. of Med., *supra*, at 3. See also Am. Psychiatric Ass'n, *Diagnostic and Statistical Manual of Mental Disorders* 829 (5th ed. 2013) [hereinafter "DSM-5"] (defining *sex* as the "biological indication of male and female").

[9] See NPG Education, A BRIEF HISTORY OF GENETICS: DEFINING EXPERIMENTS IN GENETICS 7.2 (2010).

[10] See L.S. Mayer & P.R. McHugh, *Sexuality and Gender: Findings from the Biological, Psychological, and Social Sciences*, 50 NEW ATLANTIS 1, 90 (2016). An organism is biologically male or female if it is physiologically designed to perform one of the respective roles in sexual reproduction. See *id.*, at 89; DSM-5, *supra*, at 829.

[11] See Inst. of Med., *supra*, at 3; Moore, *supra*, at 29.

Transgender advocates claim the existence of persons with "intersex"[12] conditions disproves the accepted scientific understanding that sex is binary.[13] These rare pathological disorders,[14] however, do not negate the binary classification of sex or represent the existence of a third sex.[15]

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[12] *Intersex* is colloquial for Disorders of Sex Development (DSD)—underlying medical conditions where "the phenotype is not classifiable as either male or female, or … chromosomal sex is inconsistent with phenotypic sex." L. Sax, *How Common is Intersex? A Response to Anne Fausto-Sterling*, 39(3) J. SEX RESEARCH 174–78 (2002). See also J.M. Beale & S.M. Creighton, *Long-term health issues related to disorders or differences in sex development/intersex*, 94 MATURITAS 143–48 (2016) (explaining *intersex* describes a "diverse group of congenital conditions").

[13] See, e.g., Amic. Br. for Transgender Legal Def. & Educ. Fund & 33 Org. Serving Transgender Individ., p. 12 fn 8, *Harris*, 139 S. Ct. 1599 [hereinafter "TLDEF Brief"] ("Some people are born with XXX, XYY, or XXY pairing[.]").

[14] DSD occurs in "fewer than 2 out of every 10,000 births." Sax, *supra*, at 178. See also A. Berglund, et al, *Incidence, Prevalence, Diagnostic Delay, and Clinical Presentation of Female 46XY Disorders of Sex Development*, 101(12) J. CLIN. ENDOCRINOL. METAB. 4532–40 (2016) (finding prevalence of all known 46XY karyotype females since 1960 to be 6.4 per 100,000).

[15] The presence of these rare exceptions confirms the reality of the binary nature of sex. See Sax, *supra*, at 174–78 (explaining "naturally produced" pathological conditions are not "normal"). Further, persons with DSD have significantly reduced fertility. See J. Słowikowska-Hilczer, et al., *Fertility outcome and information on fertility issues in individuals with different forms of disorders of sex development: findings from the dsd-LIFE study*, 108(5) FERTIL. STERIL. 822–31 (2017).

Further, the immutability of sex reveals the fallacy in arguments by Respondent and some *amici* that equate changing one's religion with changing one's sex.[16] Title VII defines religion to "include[] all aspects of religious observance and practice," 42 U.S.C. 2000e(j), which would include changes in religion. Not so with the immutable term *sex*. Moreover, while the aims of federal law are furthered by affirming a person's freedom to change religion, redefining *sex* to be changeable threatens the aim of protecting biological women, which was the primary impetus for including *sex* in laws such as Title VII[17] and Title IX.[18]

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[16] Stephens Brief, *supra*, at 26–27 (comparing changing religion with changing sex); Amic. Br. of Transgender Law Ctr., Ctr. for Constitutional Rights, & 44 Other Non-Profit & Grassroots Org., p. 8, *Harris*, 139 S. Ct. 1599 ("[T]ransitioning from living as one sex to another is no different than changing one's religion.").

[17] "The problem sought to be remedied by adding 'sex' to the prohibited bases of employment discrimination was the pervasive discrimination against women in the employment market, and the chosen remedy was to prohibit discrimination that adversely affected members of one sex or the other." *Zarda v. Altitude Express, Inc.*, 883 F.3d 100, 143 (2d Cir. 2018) (Lynch, J., dissenting), *cert. granted sub nom. Altitude Express, Inc. v. Zarda*, 139 S. Ct. 1599 (2019).

[18] The negative impact on Title IX has been argued by other *amici* and need not be reasserted here. See, e.g., Amic. Br. for States of Neb., Ala., Ark., Kan., La., Okla., S.C., S.D., Tenn., Tex., Utah, W. Va., Wyo., & the Commonwealth of Ky., by & through Gov. Matthew G. Bevin, Paul L. Lepage, Gov. of Me., & Gov. Phil Bryant of the State of Miss., pp. 5–6, *Harris*, 139 S. Ct. 1599. See also Sheila Jeffreys, *Transgenderism and feminism*, *in* GENDER HURTS 42 (2014) (arguing the "disappearance of women renders feminism superfluous").

B. Differences between the Biological Sexes are Real and Consequential, Regardless of Transgender Status.

Sex differences are real and consequential. Males and females share over "6500 protein-coding genes" that are expressed by each biological sex with "significant" differences[19] that can impact a person's brain and organ systems, behavior, propensity to develop diseases, cognitive and emotional processes, and responses to toxins and drugs.[20]

Because a person always will remain biologically male or female regardless of transgender status, that physiology will have a lifelong bearing on that person's health. Diseases that affect both sexes often have different frequencies, presentations, and responses to treatments in males and females; therefore, different preventative, diagnostic, and treatment approaches

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[19] Moran Gershoni & Shmuel Pietrokovski, *The landscape of sex-differential transcriptome and its consequent selection in human adults*, 15(7) BMC BIOLOGY 2, 8 (2017).

[20] See e.g., H.J. Kang, et al., *Spatio-temporal transcriptome of the human brain*, NATURE, 478, 483–89 (2011) (during prenatal period); *Why Gender-Specific Medicine Matters in the Emergency Department*, EMERGENCY PHYSICIANS MONTHLY (2013) (premature male babies face greater risks due to "prenatal testosterone" delaying "lung maturity"); A.P. Arnold, et al., *Sex Hormones and Sex Chromosomes Cause Sex Differences in the Development of Cardiovascular Diseases*, 37 ARTERIOSCLER. THROMB. VASC. BIOL. 746–56 (2017) (risk factors for cardiovascular disease); Jane F. Reckelhoff, *Gender differences in hypertension*, *in* 27(3) CURRENT OPINION IN NEPHROLOGY AND HYPERTENSION 176–81 (2018) (hypertension).

may be required for biological males and females.[21] If a doctor were to treat a patient in accordance with transgender status instead of biological sex, the results could be catastrophic. For example, some heart medications are three times more likely to cause lethal heart rhythms in biological women than in men,[22] and a biological woman with an atrial fibrillation heart condition "will require smaller amounts of warfarin [than a man] to become therapeutic."[23]

This physiological reality rebuts the claims of some *amici* that transgender status cannot be "disentangled from discrimination because of sex … because being transgender entails a difference between a person's gender identity and birth sex."[24] In fact, as shown in the next section, the line between sex and Respondent's asserted gender constructs is biologically determinable. Injecting an alchemy of subjective factors into the equation cannot transform transgender status into biological sex.

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[21] Inst. of Med., *supra*, at 3.

[22] M.H. Lehmann, et. al., *Sex difference in risk* of *torsade de pointes with d,l-sotalol*, 94(10) CIRCULATION 2535–41 (1996).

[23] *Why Gender-Specific Medicine Matters in the Emergency Department*, EMERGENCY PHYSICIANS MONTHLY (2013) (noting biological women are at higher risk for a hemorrhagic stroke).

[24] See, e.g., Amic. Br. of GLBTQ Legal Advocates & Def., Nat'l Ctr. for Lesbian Rights, et al., p. 15, *Harris*, 139 S. Ct. 1599; Amic. Br. for the Legal Aid Society, pp. 19–24, *Harris*, 139 S. Ct. 1599 (calling disentanglement attempts "unworkable").

C. The Gender Constructs Associated with Transgender Status are Subjective.

Unlike sex, the gender constructs associated with transgender status are defined by subjective components and are not medically determinable. *Gender* itself is a grammar term[25] that debuted in the medical literature in 1955.[26] Although *sex* and *gender* may be synonyms, today some use *gender* to refer to "socially constructed roles … that a given society considers appropriate" for men and women, which influence how people "feel about themselves."[27]

Gender identity is a mutable, subjective construct—a "deeply felt, inherent sense of being" male, female, "or an alternative gender."[28] One *amici* calls it an "intuitive self-knowledge"[29]—a subjective notion. And some "identify their gender as falling outside the binary constructs of 'male' and 'female,'" to

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[25] Judith Butler, GENDER TROUBLE: FEMINISM AND THE SUBVERSION OF IDENTITY 6–7 (1990) (*gender* describes nouns).

[26] See J. Meyerowitz, *A History of "Gender,"* 113 AM. HIST. REV. 1346, 1353 (2008).

[27] Am. Psychological Ass'n, *Answers to Your Questions about Transgender People, Gender Identity, and Gender Expression* 1 (3d ed. 2014) [hereinafter "Am. Psychological Ass'n Answers"].

[28] Am. Psychological Ass'n, *Guidelines for Psychological Practice with Transgender and Gender Nonconforming People*, 70 AM. PSYCHOLOGIST 832 (2015).

[29] See TLDEF Brief, *supra*, at 13.

include "androgynous, multigendered, gender nonconforming, third gender, and two-spirit."[30]

Gender dysphoria is a psychological condition in the DSM-5, with separate criteria for children and for adolescents and adults. Criterion A requires "marked incongruence between one's experienced/expressed gender and assigned gender, of at least 6 months' duration, as manifested by at least six" subjective criteria for children (but only two criteria for adolescents and adults):[31] (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 characteristics 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."[32] Criterion B requires the condition be "associated with clinically significant distress or impairment in social, occupational or other important areas of functioning."[33] The prevalence of adult gender dysphoria ranges from

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[30] Am. Psychological Ass'n Answers, *supra*, at 2.

[31] DSM-5, *supra,* at 452–53.

[32] *Id.* See also Tomer Shechner, *Gender Identity Disorder: A Literature Review from a Developmental Perspective*, 47 ISR. J. PSYCHIATRY & RELATED SCI. 132-38 (2010) (addressing youth).

[33] DSM-5, *supra*, at 451–53.

0.005% to 0.014% for natal males and 0.002% to 0.003% for natal females.[34]

Transgender refers to the "broad spectrum of individuals who transiently or persistently identify with a gender different from their natal gender."[35] The term developed from *transsexual*, which was coined in the 1950s.[36] The term "is not isomorphic with a mental health diagnosis of gender dysphoria."[37] And while some suggest that objective testing can identify a person's transgender status,[38] those claims are

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[34] *Id.* at 451–60.

[35] *Id.* at 451.

[36] See Virginia Prince, *Change of Sex or Gender*, 10 TRANSVESTIA 53, 60 (1969) (coining the term and stating, "I … know the difference between sex and gender and have simply elected to change the latter and not the former."). See also Sheila Jeffreys & Lorene Gottschalk, *Women who transgender*, *in* GENDER HURTS 14 (2014).

[37] K.J. Zucker, *The myth of persistence: response to "A critical commentary on follow-up studies and 'desistance' theories about transgender and gender nonconforming children" by Temple Newhook et al*, 19(2) INT'L J. TRANSGENDERISM 231–45 (2018) [hereinafter "Zucker Persistence"].

[38] See TLDEF Brief, *supra*, at 17 (claiming MRI scans "depict patterns associated with … affirmed sex rather than sex assigned at birth"); Amic. Br. of the Am. Med. Ass'n, the Am. Coll. of Physicians & 14 Add'l Med., Mental Health & Health Care Org., p. 5, *Harris*, 139 S. Ct. 1599 [hereinafter "AMA Brief"], p. 9 (citing "[s]ome research" that "suggests there may be biological influences" for transgender status).

suspect.[39] There are "no laboratory, imaging, or other objective tests to diagnose a 'true transgender' child."[40] Further, a "biomarker of gender identity is not (yet) available," and studies suggesting otherwise "lack replication."[41]

Transgender advocates seek to expand *sex* to include a host of subjective criteria, such as a person's "brain gender" and the child-rearing they receive,[42]

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[39] See Emiliano Santarnecchi, et al., *Intrinsic Cerebral Connectivity Analysis in an Untreated Female-to-Male Transsexual Subject: A First Attempt Using Resting-State fMRI*, 96 NEUROENDOCRINOLOGY 188–93 (2012) (finding a transsexual's brain profile was more closely related to his biological sex than his desired one); Hans Berglund, et al., *Male-to-Female Transsexuals Show Sex-Atypical Hypothalamus Activation When Smelling Odorous Steroids*, 18 CEREBRAL CORTEX 1900–08 (2008) (finding no innate, biological cause).

[40] Michael K. Laidlaw, et al., *Letter to the Editor: "Endocrine Treatment of Gender-Dysphoric/Gender-Incongruent Persons: An Endocrine Society Clinical Practice Guideline,"* 104(3) J. CLIN. ENDOCRINOL. METAB. 686–87 (2019) [hereinafter "Laidlaw Letter"].

[41] P.A. Lee, et al., *Global Disorders of Sex Development Update since 2006: Perceptions, Approach and Care*, 85 HORM. RES PAEDIATR. 168 (2016).

[42] See TLDEF Brief, *supra*, at 11–12.

"social activities,"[43] and even "[w]ho one dates."[44] One *amicus* asserts that gender is "fluid" with a "continuous dimension of masculinity/femininity"[45] But these ideological factors cannot define what it means to be male or female.[46] Indeed, fully detaching gender from the binary sexes would lead to the "absurd" result that every person is a gender unto themselves.[47]

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[43] See Amic. Br. of Philosophy Prof., pp. 12–13, *Harris*, 139 S. Ct. 1599 (arguing *sex* includes "social meanings" of physical features, such as "expectations, generalizations, and stereotypes concerning sexuality, gender presentation, affect, personality, social activities, reproductive and family role, mannerisms").

[44] See Amic. Br. of Am. Fed'n of Labor & Congress of Indust. Org., p. 9, *Harris*, 139 S. Ct. 1599.

[45] See Amic. Br. of Am. Psychological Ass'n, Am. Psychiatric Ass'n, Am. Ass'n for Marriage & Family Therapy, Ga. Psychological Ass'n, Mich. Psychological Ass'n, & N.Y. State Psychological Ass'n, p. 9, *Harris*, 139 S. Ct. 1599 (quoting J. Drescher & W. Byne, *Gender Identity, Gender Variance and Gender Dysphoria*, *in* COMPREHENSIVE TEXTBOOK OF PSYCHIATRY 2023 (B.J. Sadock, et al., eds., 10th ed. 2017)).

[46] See Cretella, *supra*, at 50–51 (calling it a "belief that has no basis in rigorous science"). See also J. Michael Bailey & Kiira Triea, *What Many Transsexual Activists Don't Want You to Know and Why You Should Know It Anyway*, 50(4) PERSPECTIVES IN BIOLOGY & MED. 521–34 (2007) (finding little scientific basis).

[47] Mayer & McHugh, *supra*, at 88 (arguing this kind of fluid gender based on "distinctions in behavior, biological attributes, or psychological traits" could lead to each person having a gender defined by their "unique combination of characteristics"). In fact, some already claim there are more than one hundred different genders. See *Genderfluid Support*, https://genderfluidsupport.tumblr.com/gender.

In an attempt to protect transgender status, Respondent and some *amici* rely on a plurality of this Court's discussion of "sex-based stereotypes" in *Price Waterhouse v. Hopkins*[48] to make an end-run around biological sex.[49] But transgender status is not the mere expression of non-stereotypical behaviors for a particular sex; it is essentially a declaration that a person is different from their immutable, innate biological sex. Unlike in *Price*—where this Court permitted evidence of sex stereotyping to help prove a biological woman was being discriminated against "because of" her status as a biological woman—Respondent seeks to use sex stereotypes *not* to protect a biological man's status as a biological man but to create a new category of protection for his asserted status as a transgender woman.

D. Desistance and Detransitioning Illustrate the Impracticality of Subjective Gender Constructs as a Means of Classification.

While biological sex offers an objective means of classification, subjective gender constructs do not, as demonstrated by desistance and detransitioning.

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[48] 490 U.S. 228 (1989).

[49] See, e.g., Stephens Brief, *supra*, at 20, 28–36; Amic. Br. of Statutory Interp. & Equality Law Scholars, p. 7, *Harris*, 139 S. Ct. 1599 (arguing discrimination is "because of" sex because employers would not act "but for" the fact that transgender employees have a different biological sex).

Desistance refers to the statistical fact that most "prepubertal children with a childhood diagnosis" of gender dysphoria do "not remain gender dysphoric in adolescence."[50] Persistence rates vary, with natal males desisting at least 70 to 97.8% of the time and natal females desisting at rates of at least 50 to 88%.[51]

Transgender advocates push for earlier "social transitioning"[52] for those with gender dysphoria. Yet, with such high rates of desistance, "there are reasons to be skeptical about the merit in recommending an early gender social transition as a first-line

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[50] Wylie C. Hembree, et al., *Endocrine Treatment of Gender-Dysphoric/Gender-Incongruent Persons: An Endocrine Society Clinical Practice Guideline*, 102 J. CLIN. ENDOCRINOL. METAB. 3869–3903 (2017) [hereinafter "Endocrine Society Guidelines"]. See also P.Y. Cohen-Kettenis, et al., *The treatment of adolescent transsexuals: changing insights*, 5(8) J. SEX MED. 1892–97 (2008) (finding 80–95% of gender dysphoric pre-pubertal children will accept their biological sex by the end of adolescence).

[51] DSM-5, *supra*, at 455. See also T.D. Steensma, et al., *Factors Associated with Desistence and Persistence of Childhood Gender Dysphoria: A Quantitative Follow-Up Study*, 52(6) J. AM. ACADEMY CHILD & ADOLESC. PSYCHIATRY 582–90 (2013) (finding 207 of 246 children with gender dysphoria—84.2%—desisted by adolescence or adulthood). See also J. Ristori & T.D. Steensma, *Gender dysphoria in childhood*, 28(1) INT'L REV. PSYCHIATRY 13–20 (2016) (finding a 61–98% desistance rate).

[52] See AMA Brief, *supra*, at 15 (defining "social transition" as "living one's life fully in accordance with one's gender identity," to include "publicly identifying oneself as that gender through … their name, pronoun usage, dress, manner and appearance, and social interactions").

treatment."[53] This is especially so because there is "currently no way to predict who will desist and who will remain dysphoric."[54] But Respondent and some *amici* ignore desistance, along with the increasing numbers of "detransitioners"—those who regret their gender-affirming therapy and opt to stop it, re-identify with their natal sex, and work toward reversing the damage.[55]

The subjectivity of the gender constructs associated with transgender status, combined with high rates of desistance and the experiences of those who have detransitioned, demonstrate the impracticality of redefining *sex* within federal law to include these expansive constructs. As the next section argues, any changes to Title VII to potentially address these

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[53] K.J. Zucker, *Debate: Different strokes for different folks*, CHILD & ADOLESC. MENTAL HEALTH (2019) [hereinafter "Zucker Debate"]. See also Zucker Persistence, *supra*, at 231–45 (defending studies showing desistance is common).

[54] Laidlaw Letter, *supra*, at 686–87. See also Ristori & Steensma, *supra*, at 13–20 (same).

[55] See Hacsi Horváth, *The Theatre of the Body: A detransitioned epidemiologist examines suicidality, affirmation, and transgender identity*, 4thwavenow.com, Dec. 19, 2018 (discussing 2016 survey of 203 detransitioners; 59% reported finding alternative mechanisms of coping with gender dysphoria, but only 7% listed institutional discrimination as a reason for detransitioning). See also Stella Morabito, *Trouble in Transtopia: Murmurs of Sex Change Regret*, THE FEDERALIST, Nov. 11, 2014; Walt Heyer, TRANS LIFE SURVIVORS (2018); *Pique Resilience Project*, https://www.youtube.com/watch?v=kxVmSG_TgNxI (women tell detransition stories and answer questions).

modern constructs is a matter appropriate for legislative consideration and decision, not judicial fiat.

II. REDEFINING *SEX* IS NOT A JUDICIAL TASK, ESPECIALLY CONSIDERING THE DEBATABLE POLICY JUSTIFICATIONS OFFERED TO EXPAND THE TERM AND THE UNCERTAIN IMPLICATIONS OF REVISION.

Redefining *sex* to include the subjective gender constructs associated with transgender status would constitute improper judicial overreach founded upon debatable policies based on faulty data, unaddressed mental health comorbidities, and unacknowledged social and medical risks. Further, the ramifications of changing federal law are uncertain and could have negative therapeutic and medical impacts on those suffering from gender dysphoria.

A. Suicide Concerns Based on Faulty Data Do Not Justify Redefining *Sex*.

The loss of any human life to suicide is heart-breaking, but the arguments asserted by Respondent and some *amici* based on suicide concerns are problematic. They argue societal stigma and discrimination contribute to high suicide rates (over

forty percent) for those who identify as transgender.[56] They suggest these vastly higher suicide rates will continue unless Title VII's definition of *sex* is expanded by this Court.[57] But those conclusions are based on flawed data and ignore plausible explanations for the tragedy of transgender suicides.

First, the three reports in the past five years[58] that claim the trans-identified suicide-attempt rate is greater than forty percent are inherently flawed because they use convenience sampling, from which

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[56] Amic. Br. for the States of Illinois, New York, et al., pp. 8–9, *Harris*, 139 S. Ct. 1599 (citing S.E. James, et al., *The Report of the 2015 U.S. Transgender Survey*, NAT'L CTR. FOR TRANSGENDER EQUALITY 112 (2016)). See also Amic. Br. for the Legal Aid Society, p. 15, *Harris*, 139 S. Ct. 1599 (arguing "the rate of attempted suicide is more than double" for those discriminated against "on account of their gender identity") (citing *National Survey on LGBTQ Youth Mental Health 2019*, THE TREVOR PROJECT 4 (2019) (drawing its convenience sample from "individuals aged 13–24 … recruited via targeted ads on social media")); Amic. Br. of Scholars Who Study the Transgender Population, p. 22, *Harris*, 139 S. Ct. 1599 (arguing "[s]tigma, prejudice, and discrimination" results in more transgender suicide attempts).

[57] See AMA Brief, *supra*, at 4 (arguing "discrimination directly interferes with medical treatment of gender dysphoria" because "[l]ack of treatment" will increase the rate of suicide).

[58] See A.P. Haas, et al., *Suicide Attempts Among Transgender and Gender Non-Conforming Adults: Findings of the National Transgender Discrimination Survey*, THE WILLIAMS INSTITUTE (2014); James, *supra* [2016]; R.B. Toomey, et al., *Transgender Adolescent Suicide Behavior*, 142(4) PEDIATRICS (2018).

statistical generalizations cannot be drawn.[59] Further, they are contradicted by more solid studies from California, which have concluded that "highly gender nonconforming" adolescents possessed statistically similar rates of attempted suicide [three percent] to "gender conforming adolescents,"[60] and that the adult trans-identified suicide attempt rate was twenty-two percent—much less than the forty-percent figure relied upon by some transgender advocates to help justify redefining *sex*.[61] Any attempted suicide is a tragedy, but isolated and overstated statistics should not be used to advocate for changing federal law.

Second, the suicide statistics associated with transgender status are plausibly explained by other

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[59] See Haas, *supra*, at 3–4 (acknowledging convenience sampling and limits of data use in the "National Transgender Discrimination Survey"); James, *supra,* at 61 (acknowledging convenience sampling in "The Report of the 2015 U.S. Transgender Survey"); Toomey, *supra* (acknowledging use of data from the "Profiles of Student Life: Attitudes and Behaviors Survey," which was collected using convenience sampling). See also Horváth, *supra* (discussing the sampling defects); Mary Hibberts, et al., *Common Survey Sampling Techniques*, HANDBOOK OF SURVEY METHODOLOGY FOR THE SOCIAL SCIENCES, (Lior Gideon, ed., 2012) (discussing sampling errors).

[60] See Bianca Wilson, et al., *Characteristics and Mental Health of Gender Nonconforming Adolescents in California*, THE WILLIAMS INSTITUTE, at 2–3 (2017) (using sound probability-based data). See also Horváth, *supra* (discussing survey results).

[61] See J.L. Herman, et al., *Demographic and Health Characteristics of Transgender Adults in California: Findings from the 2015–2016 California Health Interview Survey*, 8 POLICY BRIEF UCLA CTR. HEALTH POLICY RES. 1–10 (2017).

factors. As the next section argues, the majority of those with gender identity disorder present with mental health issues[62]—a connection that could provide a basis for potentially higher suicide rates. For instance, ninety-six percent of adolescents in the United States attempting suicide demonstrate at least one mental illness.[63] And a 2003 study showed that ninety percent of adults and adolescents who completed suicide suffered from unresolved mental disorders.[64] Additionally, the prevalence of romantic partner domestic violence might also be a relevant factor in the transgender suicide rate.[65]

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[62] See, e.g., G. Heylens, et al., *Psychiatric characteristics in transsexual individuals: multicentre study in four European countries*, 204(2) BRITISH J. PSYCHIATRY 151–56 (2014).

[63] See M.K. Nock, et al., *Prevalence, correlates, and treatment of lifetime suicidal behavior among adolescents: results from the National Comorbidity Survey Replication Adolescent Supplement*, 70(3) J. AM. MED. ASS'N PSYCHIATRY 300–10 (2013).

[64] J. Cavanagh, et al., *Psychological autopsy studies of suicide: a systematic review*, 33 PSYCHOLOGICAL MED. 395–405 (2003). See also J.M. Bailey & R. Blanchard, *Suicide or transition: The only options for gender dysphoric kids?*, 4thwavenow.com, Sep. 8, 2017 ("The idea that mental health problems–including suicidality–are caused by gender dysphoria rather than the other way around … [is] unproven[.]").

[65] See D. Skerrett, et al., *Suicides among lesbian, gay, bisexual, and transgender populations in Australia: An analysis of the Queensland Suicide Register*, 6(4) ASIA-PACIFIC PSYCHIATRY 440–46 (2014). See also Susan Jones, *Domestic Violence in LGBT Relationships Targeted*, CNSNEWS.COM (2008) (discussing a medical association's efforts to educate medical professionals about LGBT domestic violence).

Third, scientific data does not support the suggestion that societal stigma against those with gender dysphoria is causally linked to higher rates of suicide. A 2016 study examined forty years of data in children referred for treatment for gender dysphoria and found no support for the argument "that social ostracism of gender-referred children was a unique correlate of suicidality."[66] Other studies also failed to find this causal link.[67] Nor can it be demonstrated—contrary to suggestions by transgender advocates[68]—that suicide rates will decrease when more of those who identify as transgender complete their transition through sex-reassignment surgery. A Swedish study of a thirty-year cohort of all 324 sex-reassigned persons in Sweden found the suicide rate for

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[66] Madison Aitken, et al., *Self-Harm and Suicidality in Children Referred for Gender Dysphoria*, 55(6) J. AM. ACADEMY CHILD ADOLESC. PSYCHIATRY 513–20 (2016). Also, suicide rates were lower in the 1950s despite greater societal stigma against those with transgender status. See Horváth, *supra* (comparing U.S. suicide rate for adolescents and young adults in 1950 ["4.5 suicides per 100,000 AYA"] to modern trends).

[67] See Mayer & McHugh, *supra*, at 79–81 (reviewing scientific literature and finding it "impossible to prove through these studies that stigma leads to poor mental health, as opposed to, for example, poor mental health leading people to report higher levels of stigma, or a third factor being responsible").

[68] See AMA Brief, *supra*, at 23 (claiming that "living in congruence with one's gender identity"—through such interventions as social transitioning, puberty blockers, hormone treatments, and surgeries—"promotes well-being").

that group to be nineteen times higher than the general population.[69]

In sum, the data on suicide leaves strong reason to doubt arguments by Respondent and some *amici* that seek to convince this Court of the necessity of redefining *sex* in order to save lives from suicide.[70]

B. Redefining *Sex* Could Undermine the Therapeutic Treatment of Mental Health Comorbidities.

In light of the connection between mental illness and suicide, more focus should be given to the relationship between transgender status and mental illness. But expanding *sex* to include subjective gender constructs could result in the stifling of useful therapeutic approaches to treating gender dysphoria.

Studies around the world have found a high prevalence of mental health comorbidities associated with gender dysphoria. Researchers from the United

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[69] See C. Dhejne, et al., *Long-Term Follow-Up of Transsexual Persons Undergoing Sex Reassignment Surgery: Cohort Study in Sweden*, 6(2) PLoS ONE (2011).

[70] Decisions related to suicide should be made for the correct reasons. See S. Sadjadi, *The Endocrinologist's Office—Puberty Suppression: Saving Children from a Natural Disaster?* 34(2) J. MED. HUMANITIES 255–60 (2013) (discussing "scare tactics" used to justify "necessity" of gender-related medical interventions in children). See also Jeremiah Keenan, *"Doctor" Advises Threatening Suicide to Get Transgender Treatments for Kids*, THE FEDERALIST, April 1, 2019 (reporting comments by a psychologist that gender-dysphoric children learn "fast" they should "[p]ull a stunt. Suicide, every time" to receive treatment).

Kingdom,[71] Finland,[72] and the Netherlands[73] have found comorbidities with autism spectrum disorder. And in a four-nation study, those with "gender identity disorder showed more psychiatric problems than the general population," with almost seventy percent holding a "current and lifetime diagnosis."[74] The prevalence of comorbid psychopathologies can run as

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[71] See S.D. Stagg, et al., *Autistic traits in individuals self-defining as transgender or nonbinary*, 61 EUROPEAN PSYCHIATRY 17–22 (2019) (finding autism overrepresented in "transgender and nonbinary groups" in a U.K. survey). See also A.C. Clarke & A. Spiliadis, "*Taking the Lid off the Box": The Value of Extended Clinical Assessment for Adolescents Presenting with Gender Identity Difficulties*, 24(2) CLIN. CHILD PSYCHOLOGY & PSYCHIATRY 338–52 (2019) (finding majority of adolescents presenting with "gender identity difficulties" also had "autism spectrum condition"). To compare, autism is present in one to two percent of the general population. See Centers for Disease Control and Prevention, *Data & Statistics on Autism Spectrum Disorder*, https://www.cdc.gov/ncbddd/autism/data.html.

[72] See R. Kaltiala-Heino, et al., *Two years of gender identity service for minors: overrepresentation of natal girls with severe problems in adolescent development*, 9(9) CHILD & ADOLESC. PSYCHIATRY & MENTAL HEALTH (2015) (finding seventy-five percent of adolescents seeking gender services "had been or were currently undergoing … psychiatric treatment for reasons other than gender dysphoria," twenty-six percent had an autism spectrum disorder, and eighty-seven percent were female).

[73] See A.L. de Vries, et al., *Autism spectrum disorders in gender dysphoric children and adolescents*, 40(8) J. AUTISM DEV. DISORD. 930–36 (2010) (finding almost eight percent of children and adolescents referred to the Netherlands' multidisciplinary clinic for gender dysphoria had autism spectrum disorder).

[74] Heylens, *supra*, at 151–56.

high as eighty percent.[75] A study of rapid-onset gender dysphoria (ROGD)—the onset of gender dysphoria after puberty without prior signs—found twelve percent of adolescents had autism spectrum disorder and sixty-two percent demonstrated "a psychiatric disorder or neurodevelopmental disability preceding the onset of gender dysphoria."[76]

Yet the existence and ramifications of these mental health comorbidities is seemingly denied by Respondent and some *amici*,[77] who wish to replace therapeutic models with the medical interventions discussed below—puberty-blocking hormones, cross-sex hormones, and sex reassignment surgery.

Indeed, some *amici* criticize therapeutic approaches that seek to help those with gender dysphoria live in harmony with their natal sex.[78] But contrary to this criticism, youths in psychological therapy—such as

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[75] See K.J. Zucker, et al., *Gender Dysphoria in Adults*, 12 ANNU. REV. CLIN. PSYCHOL. 217–47 (2016) (reviewing studies).

[76] See L. Littman, *Rapid-onset gender dysphoria in adolescents and young adults: A study of parental reports*, 14(3) PLOS ONE (2018) (noting eighty-three percent were female).

[77] See, e.g., AMA Brief, *supra*, at 22 (claiming transgender health issues, such as "anxiety, depression, suicidality, [and] substance abuse," are the "direct result of stigma and not the product of any inherent psychological impairments").

[78] See, e.g., AMA Brief, *supra,* at 12–13 (claiming therapies to "force transgender people to live in accordance with the sex assigned to them at birth" causes "significant harm," and there is "no evidence that these methods alleviate gender dysphoria").

psychosocial treatments (e.g., talk therapy and family counseling)—have been able "to alleviate their [gender dysphoria], thus avoiding the radical changes and health risks of [gender affirmative therapy]."[79] Even the Endocrine Society Guidelines acknowledge that in "some forms" of gender dysphoria, "psychological interventions may be useful and sufficient."[80]

These therapeutic approaches parallel treatment for other conditions involving persistent beliefs that are inconsistent with biology, such as body-integrity-identity disorder.[81] In addition, treating gender dysphoria in minors with a "watchful waiting" approach that does not rush social transition is the standard of care around the world.[82] Using that approach, issues of "homophobia, internalized shame,

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[79] K.J. Zucker, et al., *A Developmental, Biopsychosocial Model for the Treatment of Children with Gender Identity Disorder*, 59(3) J. HOMOSEX. 369–97 (2012) [hereinafter "Zucker Development"]. See also K.D. Drummond, et al., *A Follow-up Study of Girls with Gender Identity Disorder*, 44 DEVELOPMENTAL PSYCHOLOGY 34–45 (2008) (finding gender dysphoria persisted in only three of twenty-five treated females).

[80] Endocrine Society Guidelines, *supra*, at 3880.

[81] See, e.g., Anne Lawrence, *Clinical and Theoretical Parallels Between Desire for Limb Amputation and Gender Identity Disorder*, 35 ARCHIVES SEXUAL BEHAV. 263–78 (2006) (finding similarities between body-integrity-identity disorder and gender dysphoria). See also Cretella, *supra*, at 51 (listing other similar conditions).

[82] See A.L. de Vries & P.T. Cohen-Kettenis, *Clinical management of gender dysphoria in children and adolescents: The Dutch approach*, 59(3) J. HOMOSEXUALITY 301–20 (2012).

family narratives, relational ruptures, and beliefs and fantasies associated with mid adolescence could be meaningfully thought about and integrated[.]"[83]

Further, the detriments of redefining *sex* under federal law are unclear. Changes in the law—like all change—can cause unforeseen consequences. For instance, clinicians in the United Kingdom are still perplexed by what may be causing the recent 4000% surge in the number of girls seeking gender reassignment in the past decade.[84] One likely result of redefining *sex* would be to bolster those who seek to replace therapeutic treatments with risky medical interventions, as discussed in the next section.

At a minimum, the evolving, debatable scientific and medical data about transgender status undermine the arguments of those who would ask this Court to overstep proper judicial boundaries and reinterpret *sex* in federal law right now.

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[83] Clarke & Spiliadis, *supra*, at 338–52. See also D. Singh, *A Follow up Study of Boys with Gender Dysphoria*, nymag.com at 17 (2012) (describing Dutch approach with emphasis on emotional/behavioral problems and family dynamics "rather than on direct attempts to modify gender identity"); Zucker Development, *supra*, at 369–97 (describing the model in Toronto, including its "strong emphasis on developmental factors").

[84] See Tony Grew, *Inquiry into surge in gender treatment ordered by Penny Mordaunt*, thetimes.co.uk, Sept. 16, 2018. See also Littman, *supra* (discussing a survey showing common factors in ROGD, including increased social media use, worsening mental health, and worsening isolation from non-trans-identified friends).

C. The Social and Medical Risks Associated with Gender Affirmative Interventions Argue against Redefining *Sex.*

Not only have Respondent and supporting *amici* failed to address any connection between transgender status and mental illness, but they also have failed to acknowledge the social and medical risks associated with the gender affirmative treatments they support.

As an initial matter, transgender advocates seeking the early social transition of children with gender dysphoria (e.g., registering a biological boy in school as a girl) have not sufficiently addressed the "stress associated with possible reversal of this decision," which "has been shown to be substantial."[85] Premature affirmation of gender identity "runs the risk of neglecting individual problems the child might be experiencing and may involve an early gender role transition that might be challenging to reverse if cross-gender feelings do not persist[.]"[86] In addition, the social transition of prepubertal children could complicate matters by increasing "dramatically the rate

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[85] W. Bockting, *Transgender Identity Development*, *in* APA HANDBOOK OF SEXUALITY AND PSYCHOLOGY 744 (D. Tolman & L. Diamond, eds., 2014) (advising to avoid premature labeling of gender identity and approach early social transition cautiously).

[86] *Id.*

of gender dysphoria persistence" in them.[87] In other words, it could drastically decrease the chance the gender dysphoria will resolve naturally.

By minimizing therapeutic treatment of gender dysphoria and encouraging early social transition, transgender advocates are plotting a course fraught with medical risk. Four points illustrate the problem.

First, transgender advocates claim the use of puberty-blocking hormones[88] is desirable in minors with gender dysphoria.[89] But puberty blockers are still in an experimental stage: they are insufficiently

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[87] Zucker Debate, *supra* (explaining extended dysphoria leads to "lifelong" biomedical interventions, such as "hormonal treatment and surgery"). See also Endocrine Society Guidelines, *supra*, at 3879 (acknowledging social transition "is associated with the persistence" of gender dysphoria into adolescence).

[88] Puberty-blocking hormones arrest "normal puberty at Tanner stage 2"—which occurs "before menarche in girls and before spermarche in boys"—suppress "the pituitary gonadal axis" and "maintain a state of immaturity of the male and female gonads." Michael K. Laidlaw, et al., *The Right to Best Care for Children Does Not Include the Right to Medical Transition*, 19(2) AM. J. BIOETHICS 75–77 (2019) [hereinafter "Laidlaw Right"].

[89] See AMA Brief, *supra*, at 11, 16 (arguing puberty may cause "severe distress" and "sudden trauma" in children, and advocating puberty blockers as a "fully reversible treatment [that] allows children … additional time to decide whether [to use] hormone treatment to feminize or masculinize the body").

studied,[90] inadequately supported in the medical literature,[91] and prescribed "off-label" (i.e., for conditions other than those for which officially approved).[92] In short, there is a "lack of robust, comprehensive evidence around the outcomes, side effects and unintended consequences" of hormone blockers.[93] Further, puberty-blocking hormones impair normal sexual function[94] and decrease bone density.[95]

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[90] See J. Olson, et al., *The Impact of Early Medical Treatment in Transgender Youth*, NATIONAL INSTITUTES OF HEALTH (five-year project begun in 2015 as first study to track medical effects of delaying puberty).

[91] See J. Olson-Kennedy, *Health considerations for gender non-conforming children and transgender adolescents*, U.C. SAN FRANCISCO CENTER OF EXCELLENCE FOR TRANSGENDER HEALTH (2016) (noting no publishing on impact of puberty blockers).

[92] See C. Richards, et al., *Use of puberty blockers for gender dysphoria: a momentous step in the dark*, 104 ARCHIVES OF DISEASE IN CHILDHOOD 611–12 (2019).

[93] U.K. Royal College of General Practitioners, *The role of the GP in caring for gender-questioning and transgender patients*, June 2019.

[94] Laidlaw Right, *supra*, at 75–77 (explaining male "erection, orgasm, and ejaculation[] will be significantly impaired" and females will enter "a menopausal state").

[95] See J. Tobin, et al., *The effect of GnRHa treatment on bone density in young adolescents with gender dysphoria: findings from a large national cohort*, 58 ENDOCRINE ABSTRACTS (2018) (concluding from a retrospective analysis that puberty blockers "launched" 70 trans-identified youths "on a path" to "early osteoporosis" by preventing "the expected increase by fifty percent of lifetime bone density acquired during teen years").

One study reported bone mineral density scores of the lumbar spine dropped during puberty blocking for transgender adolescent females, and they failed to increase following estrogen administration.[96]

Additionally, puberty blockers may lead to emotional harm in adolescents, who are frozen in a "prolonged childhood, secluding them from certain aspects of reality and isolating them from peer groups."[97] And there may be few psychosocial benefits that come from these hormones, which "exacerbate[] gender dysphoria."[98] By defying a more cautious "wait and see" therapeutic model, hormone blockers "push adolescents towards cross sex hormonal treatment and

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[96] See D. Klink, et al., *Bone Mass in Young Adulthood Following Gonadotropin-Releasing Hormone Analog Treatment and Cross-Sex Hormone Treatment in Adolescents With Gender Dysphoria*, 100(2) J. CLIN. ENDOCRINOL. METAB. E270–75 (2015).

[97] G. Giovanardi, *Buying time or arresting development? The dilemma of administering hormone blockers in trans children and adolescents*, 2(5) PORTO BIOMEDICAL J. 153–56 (2017). See also L.J. Vrouenraets, et al., *Early Medical Treatment of Children and Adolescents with Gender Dysphoria: An Empirical Ethical Study*, 57(4) J. ADOLESC. HEALTH 367–73 (2015) (noting puberty blockers interfere with "the integration process among the various internal and external aspects characterizing the transition to adulthood").

[98] M. Biggs, *Tavistock's Experimentation with Puberty Blockers: Scrutinizing the Evidence*, TransgenderTrend.com, March 5, 2019 (U.K. trial found "no statistically significant difference in psychosocial functioning" between children given puberty blockers and those "given only psychological support").

sex reassignment surgery," artificially breaking the natural, usual, high rates of desistance.[99]

Second, transgender advocates champion the use of cross-sex hormones, such as testosterone and estrogen, which "physically change[] the patient's genitals and secondary sex characteristics such as increased muscle mass, increased body and facial hair, male pattern baldness (for some), and a deepening of the voice in [transgender] men, and breast growth, female-associated fat distribution, softening of the skin, and decreased muscle mass in [transgender] women."[100] Advocates claim these hormones are the "standard of care" for "some adults and adolescents" with gender dysphoria to "feminize or masculinize the body."[101]

But the consequences of using cross-sex hormone therapies—which suffer from the same experimental,

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[99] Singh, *supra*, at 17. See also A.L. de Vries, et al., *Puberty suppression in adolescents with gender identity disorder: A prospective follow-up study*, 8(8) J. SEXUAL MED. 2276–83 (2011) (finding use of puberty blockers in adolescents 11–17 led to one hundred percent of them desiring gender affirmation therapy).

[100] AMA Brief, *supra*, at 16 (citing Endocrine Society Guidelines, *supra*, at 3869).

[101] AMA Brief, *supra*, at 15–16 (claiming the "[h]ormones have been clinically proven as an effective treatment for gender dysphoria with a low rate of complications").

off-label problems as puberty blockers[102]—may be "irreversible."[103] The addition of these hormones place the body in an "iatrogenic pathological state"[104] and create serious health risks. The Endocrine Society Guidelines acknowledge that transgender females receiving estrogen have a "very high risk" of thromboembolic disease and a "moderate risk" of breast cancer, macroprolactinoma, coronary artery disease, cerebrovascular disease, cholelithiasis, and hypertriglyceridemia, while transgender males receiving testosterone have a "very high risk" of erythrocytosis and a "moderate risk" of severe liver dysfunction, coronary artery disease, cerebrovascular disease, hypertension, and breast or uterine cancer.[105]

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[102] See Kjell Asplund, *Letter to Dep't of Social Affairs*, Nat'l Council for Medical Ethics (Sweden), Apr. 26, 2019, https://tinyurl.com/y6xjy7z6 (seeking analysis of "prescribing off-label puberty blockers and cross-sex hormones" to youths). See also C. Heneghan & T. Jefferson, *Gender-Affirming Hormone in Children and Adolescents*, BMJ EBM SPOTLIGHT, 21 May 2019 (noting "significant problems" with the collection and analysis of data about cross-sex hormones).

[103] See *id.*

[104] See Laidlaw Letter, *supra*, at 686–87.

[105] Endocrine Society Guidelines, *supra*, at Table 10. See also T. Alzahrani, et al., *Cardiovascular Disease Risk Factors and Myocardial Infarction in the Transgender Population*, 12(4) CIRCULATION: CARDIOVASCULAR QUALITY & OUTCOMES (2019) (explaining testosterone increases risk of heart disease fourfold in women and estrogen increases rate of blood clots and stroke nearly threefold in men); A. Radix & A.M. Davis, *Endocrine Treatment of Gender-Dysphoric/Gender-Incongruent Persons*, 318(15) J. AM. MED. ASS'N 1491–92 (2017) (listing harms).

And for youths receiving cross-sex hormones "concurrently or immediately following puberty blockers," their "reproductive cells will never mature and infertility" will result.[106]

Third, transgender advocates argue that sex reassignment surgery (or gender reassignment surgery or gender confirmation surgery) is a healthy end-state for those with a transgender status.[107] Yet it is "physiologically impossible to change a person's sex, since the sex of each individual is encoded" in the chromosomes.[108] Surgery produces mostly cosmetic changes, with poorly functioning pseudo-genitalia[109]

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[106] Howard E. Kulin, et al., *The Onset of Sperm Production in Pubertal Boys. Relationship to Gonadotropin Excretion*, 143(2) AM. J. DISEASES IN CHILDREN 190–93 (1989). See also L. Nahata, et al., *Low Fertility Preservation Utilization among Transgender Youth*, 61 J. ADOLESC. HEALTH 40–44 (2017) (fewer than five percent of affected adolescents attempt fertility preservation).

[107] See AMA Brief, *supra*, at 10 ("[T]he recognized treatment for someone with severe gender dysphoria is medical support that allows the individual to transition from their assigned sex to the sex associated with his or her gender identity. These treatments are 'effective in alleviating gender dysphoria and are medically necessary for many people.'") (citations omitted).

[108] See R.P. Fitzgibbons, et al., *The Psychopathology of "Sex Reassignment" Surgery*, 9 NAT'L CATHOLIC BIOETHICS Q. 97, 118 (2009) (noting it only "creates the appearance of the other sex").

[109] See Stephen B. Levine, *Informed Consent for Transgendered Patients*, 45(3) J. SEX & MARITAL THERAPY 218–29 (2019) ("Genital sensation [after surgery] … may be markedly reduced[.]"); Endocrine Society Guidelines, *supra*, at 3894 (noting "creation of a neopenis" is often "less than satisfactory").

and guaranteed sterility. These surgeries often lead to complications, with one retrospective study finding over fifty-one percent of patients experiencing urological problems, such as recurrent urinary tract infections and stress urinary incontinence.[110] And whatever else might be said of these surgeries, conclusive scientific evidence still does not to support their necessity.[111]

Fourth, ethical problems—especially involving informed consent—permeate the policy justifications advanced by transgender advocates. "[T]he patient does not always know best," as evidenced by "post-transition depression, detransition, pre- and postsurgical suicide rates" and the need for post-operative psychiatric

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[110] See N. Combaz & A. Kuhn, *Long-Term Urogynecological Complications after Sex Reassignment Surgery in Transsexual Patients: a Retrospective Study of 44 Patients and Diagnostic Algorithm Proposal*, 2(2) AM. J. UROL. RES. 038–043 (2017). See also M.S. Jun & R.A. Santucci, *Urethral stricture after phalloplasty*, 8(3) TRANSL. ANDROL. UROL. 266–72 (2019) (fifty-one percent urethral complication rate with phalloplasty).

[111] See Hayes, Inc., *Hormone Therapy for the Treatment of Gender Dysphoria*, HAYES MEDICAL TECHNOLOGY DIRECTORY (2014) (finding research on sex reassignment surgery "too sparse" and "too limited" to suggest conclusions). See also Centers for Medicare & Medicaid Services, *Decision Memo for Gender Dysphoria and Gender Reassignment Surgery*, June 19, 2019 (refusing national coverage determination on "gender reassignment surgery for Medicare beneficiaries with gender dysphoria because the clinical evidence is inconclusive for the Medicare population").

care.[112] This concern is even greater in cases involving children,[113] especially where parents do not agree with the interventions being imposed on them by transgender advocates. Indeed, parental rights can be compromised in these kinds of cases.

A further ethical concern involves the need for conscience protections for doctors and therapists who object to providing gender affirmative interventions based on moral or medical grounds. Instead of advocating for these protections, however, the approach advocated by Respondent and some *amici* would encourage physicians to "break their thousands-year tradition of nonmaleficence and remove healthy tissues and impair normal physiology with hormones," even though this may "inadvertently assist patients to jeopardize their connections to others and to inadvertently isolate them throughout their lives."[114]

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[112] Levine, *supra*, at 218–29 (citing Dhejne, *supra*; R.K. Simonsen, et al., *Long-term follow-up of individuals undergoing sex reassignment surgery: psychiatric morbidity and mortality*. 70(4) NORDIC J. PSYCHIATRY 241–47 (2016)).

[113] See A.C. Pustilnik & L.M. Henry, *Adolescent Medical Decision Making and the Law of the Horse*, 15 J. HEALTH CARE LAW & POLICY 1–14 (2012).

[114] Levine, *supra*, at 218–29. See also E. Moore, et al., *Endocrine treatment of transsexual people: a review of treatment regimens, outcomes, and adverse effects*, 88 J. CLIN. ENDOCRINOL. METAB. 3467–73 (2003) (explaining the "[l]ifelong need for sex hormones and management of their complications; along with further surgeries and management of surgical consequences, complications" must also be taken into consideration").

In an attempt to persuade this Court to redefine *sex* under federal law, Respondent and some *amici* suggest—as medical and psychological proof—claims that are either contraindicated or based on faulty or unproven data. But a rush to gender affirmation is not the "sole or best practice" in light of the high rates of "desistance amongst referred transgender children, and increasing awareness of detransitioning."[115]

In sum, the high level of controversy, uncertainty, and potential negative repercussions associated with the policy considerations related to transgender status demonstrate why this Court is not in the position to redefine *sex* under federal law, as Respondent seeks.

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[115] J. Salkind, et al., *Safeguarding LGBT+ Adolescents*, 364 BMJ l245 (2019). See also Andre Van Mol, *Transing California Foster Children & Why Doctors Like Us Opposed It*, PublicDiscourse.com, Oct. 28, 2018, https://www.thepublic discourse.com/2018/10/42612/ (comparing gender affirmative interventions with "the calamities of the lobotomy movement and California's former eugenics sterilization program").

CONCLUSION

For the foregoing reasons, the judgment in *R.G. & G.R. Harris Funeral Homes, Inc. v. EEOC and Aimee Stephens*, 18-107, should be reversed.

Respectfully submitted,

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APPENDIX

APPENDIX

LIST OF *AMICI CURIAE* 1a

LIST OF *AMICI CURIAE*

The American College of Pediatricians is a nonprofit national scientific organization of pediatricians and other healthcare professionals dedicated to the health and well-being of children. Formed in 2002, the College is committed to producing sound policy recommendations based upon the best available research in order to assist parents and influence society in the endeavor of childrearing. The College currently has members in forty-seven U.S. states and around the world.

The Austin Institute for the Study of Family and Culture is a nonprofit organization that fosters high-quality social science research affecting the family and uses sound research to equip civic, political, academic, and religious leaders in developing effective responses to key social challenges.

The Christian Medical and Dental Associations is a nonprofit national organization of physicians and allied healthcare professionals. Founded in 1931, it serves over 19,000 members, including psychiatrists, pediatricians, ob-gyn physicians, family-medicine physicians, nurses, and physician assistants whose patients and practices are impacted by governmental policies related to marriage, sexuality, reproduction, and childrearing. CMDA experts examine and educate others on the health, ethical, and moral aspects of such issues.

The National Catholic Bioethics Center is a nonprofit research and educational institute that applies the moral teachings of the Catholic Church to ethical issues arising in health care and the life sciences. The Center has 2,500 members in the U.S., many of whom employ or serve thousands of persons. Gender ideology and the redefinition of s*ex* have far-reaching negative implications for its membership, which regularly seeks the Center's advice on the moral quandaries in which these issues place them.