MISS-CONCEPTIONS: ABORTIFACIENTS, REGULATORY FAILURE, AND POLITICAL OPPORTUNITY

ABSTRACT

Overwhelming scientific evidence shows that the public understanding of Plan B and other emergency contraceptives as "abortifacient," or abortion-inducing, is incorrect. The FDA, the federal courts, and the executive branch compound and entrench this misunderstanding by using it as a foundation for contraceptive law and policy. This Note traces the development and consequences of this collective error. Critically, our misunderstanding has blurred the distinction between contraception and abortion, shifting contraception into the morally-contested space that abortion occupies. Failure to reckon with the reality of contraception science has shaped women's access to reproductive care, contraceptive stigma, the culture wars, and law.

TABLE OF CONTENTS

INTRODUCTION

The battle over women's right to contraception has been long-fought yet seems to approach no end. Contraception has been decriminalized since 1965,[1] but we remain bitterly divided over whether contraception is a basic component of healthcare[2] or a means by which innocent third parties become complicit in abortions and non-procreative sex.[3] These debates play out in numerous spheres. Recently, the Trump Administration rolled back the Obama-era "contraceptive mandate" that required all insurers to provide contraception to women free of charge. Employers and other providers of insurance now may cite spiritual or moral opposition to contraception and avoid coverage, leaving costs to the female users.[4] *Hobby Lobby* also exposed religious opposition to insurance that includes contraception coverage,[5] but the Supreme Court is not alone in deciding these contentious cases.[6] State governments have also waded into the fray, passing their own contraceptive mandates.[7]

Political objections to government or employer-funded contraception take a variety of forms, ranging from objections to requiring men to support female-only healthcare[8] to concerns

[1] Griswold v. Connecticut, 381 U.S. 479, 485-86 (1965).
[2] *See, e.g.*, Linda Greenhouse & Reva Siegel, *The Difference a Whole Woman Makes: Protection for the Abortion Right After Whole Woman's Health*, 126 YALE L.J. FORUM (Oct. 11, 2016).
[3] *See, e.g.*, BRYAN C. HODGE, THE CHRISTIAN CASE AGAINST CONTRACEPTION: MAKING THE CASE FROM A HISTORICAL, BIBLICAL, SYSTEMATIC, AND PRACTICAL THEOLOGY & ETHICS (2010).
[4] Religious Exemptions and Accommodations for Coverage of Certain Preventive Services Under the Affordable Care Act, 82 Fed. Reg. 47,792; Moral Exemptions and Accommodations for Coverage of Certain Preventive Services Under the Affordable Care Act, 82 Fed. Reg. 47,838.
[5] Burwell v. Hobby Lobby Stores, Inc., 134 S. Ct. 2751, 2779-80, (2014).
[6] *See, e.g.*, Stormans, Inc. v. Selecky, 854 F. Supp. 2d 925, 932 (9th Cir. 2012); *Menges v. Blagojevich*, 451 F. Supp. 2d 992 (C.D. Ill. 2006).
[7] *See* Insurance Coverage of Contraceptives, GUTTMACHER INST., (Oct. 1, 2017), https://www.guttmacher.org/state-policy/explore/insurance-coverage-contraceptives.
[8] Avi Selk, *A Congressman Said Making a Man Get Maternity Insurance Was 'Crazy.' A Woman's Reply Went Viral*, WASH. POST (May 15, 2017) https://www.washingtonpost.com/news/the-fix/wp/2017/05/15/a- congressman-

about promoting sex outside of marriage.[9] In recent years, social conservatives have raised a new objection: certain kinds of contraception cause abortions.[10] This belief has led insurance providers and pharmacists to refuse to provide these forms of contraception on the view that to do so would make them complicit in abortions.[11]

This belief drives the understanding that a certain class of contraceptives acts not by stopping ovulation, the mechanism of most forms of contraception, but instead by destroying an egg that has already been fertilized. Objectors term these contraceptives "abortifacients" because they believe that a pill that stops a fertilized egg from further developing causes an abortion. Emergency contraception pills, commonly called "the morning after pill" or Plan B, are the most common forms of contraception considered to be abortifacients. Anti-abortion groups have rallied against abortifacients, most notably in the 2014 *Hobby Lobby* case.[12] Pharmacists have also asserted complicity-based objections to supplying abortifacients.[13]

Public discussion and litigation over refusals to be complicit in abortifacient-caused abortions has generally focused on whether or not a fertilized egg is a new life that ought to be protected.[14] The debate therefore centers on whether pregnancy has begun when an egg has been fertilized but not yet implanted in the uterus. Pro-choice advocates and most obstetricians say there

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said-making- a-man- get-maternity- insurance-was- crazy-a-womans-reply- went-viral/; Georgette Bennett, *Why Cover Viagra If Contraceptives Aren't Covered?*, HUFFINGTON POST, July 10, 2017, https://www.huffingtonpost.com/entry/why-cover-viagra-if-contraceptives-arent-covered_us_5963eceee4b0deab7c646b13.

[9] *See, e.g.*, United States Congregation of Catholic Bishops. *United and Procreative Nature of Intercourse*, http://www.usccb.org/issues-and-action/marriage-and-family/natural-family-planning/catholic-teaching/upload/Unitive-and-Proc-Nature-of-Interc.pdf.

[10] *See, e.g.*, The Life Institute, Abortifacients: An Overview, Sept. 29, 2014, http://www.lifeissues.org/2014/09/abortifacients-overview/.

[11] *See* Hobby Lobby Stores, 134 S. Ct. 2751 *supra* note 5.

[12] 134 S. Ct. 2751.

[13] *See, e.g.*, Stormans, Inc. v. Selecky, 854 F. Supp. 2d 925 at 932 (9th Cir. 2012).

[14] *See, e.g., id.*; National Right to Life, *When Does Life Begin?*, http://www.nrlc.org/abortion/wdlb/ (quoting many sources that state that life begins at conception); The Life Institute, *supra* note 10.

is no pregnancy prior to implantation, while opponents of abortifacients disagree.[15] This dispute dominates dialogue about abortifacients.

It misses the point. In this Note I show that we ought to focus on how these forms of contraception *actually function*, because a proper understanding of the mechanism of so-called abortifacients makes clear that they do not cause abortion, no matter when one thinks pregnancy begins. Very strong evidence shows that Plan B and its cousin, Ella, work exactly like the common daily contraceptive pill—they stop ovulation. No egg is released, no egg is fertilized, and no fertilized egg is destroyed. Under either the pro-life or pro-choice definitions of pregnancy, these

[15] Since 1965, the American College of Obstetricians and Gynecologists has defined pregnancy as beginning with implantation. AM. CONG. OF OBSTETRICIANS & GYNECOLOGISTS, TERMINOLOGY BULLETIN NO. 1: TERMS USED IN REFERENCE TO THE FETUS (1965); AM. CONG. OF OBSTETRICIANS & GYNECOLOGISTS, COMMITTEE ON TERMINOLOGY, OBSTETRIC-GYNECOLOGIC TERMINOLOGY (1972); AM. CONG. OF OBSTETRICIANS & GYNECOLOGISTS, STATEMENT ON CONTRACEPTIVE METHODS (1998); AM. CONG. OF OBSTETRICIANS & GYNECOLOGISTS, SEPTEMBER 2015 PRACTICE BULLETIN, http://www.acog.org/-/media/Practice-Bulletins/Committee-on-Practice-Bulletins----Gynecology/Public/pb152.pdf. For textbook uses of this definition, see, HUGHES EC, ED., OBSTETRIC-GYNECOLOGIC TERMINOLOGY: WITH SECTION ON NEONATOLOGY AND GLOSSARY OF CONGENITAL ANOMALIES, 299, 327(1972); C.R.B. BECKMANN ET AL. OBSTETRICS AND GYNECOLOGY 68 (5th ed. 2006). In his 1852 obstetrics textbook, C.D. Meigs, a professor of midwifery at Jefferson Medical College, explained that "Fecundation [fertilization] is not conception [pregnancy]. . . A fecundated ovulum entering into the womb through the Fallopian tube, and falling without delay into the vagina, may be destroyed or lost before conception can take place . . . Conception is the fixation of a fecundated ovum upon the living surface of the mother; it is the formation of an attachment to or union with the womb, the tube etc, of the mother." C.D. MEIGS OBSTETRICS: THE SCIENCE AND THE ART 175-176 (2d ed. 1852). The Christian Medical and Dental Association, disagrees, saying, "[S]cientifically and biblically, conception is most appropriately defined as fertilization. . . . It is artificial and arbitrary to use other proposed biological 'markers' [such as implantation]." CHRISTIAN MED. & DENTAL ASS'NS, ETHICS STATEMENTS 43, https://cmda.org/library/doclib/CMDA-Ethics-Statements-14withrefer.pdf. Obstetricians have generally adopted the former definition because, 1) the hormone that prevents menstruation and is the basis of the pregnancy test is not produced before implantation, so women cannot know if they are pregnant prior to implantation, L.S. COSTANZO, PHYSIOLOGY 458 (3d ed. 2006); KEITH L. MOORE ET AL. THE DEVELOPING HUMAN: CLINICAL ORIENTED EMBRYOLOGY 40 (10th ed. 2016); A.J. Wilcox et al. *Time of Implantation of the Conceptus and Loss of Pregnancy*. 340 NEW ENG. J. MED. 1796-1799 (1999), 2) in vitro fertilization allows for fertilization without pregnancy, *In Vitro Fertilization: IVF*, AM. PREGNANCY ASS'N, http://americanpregnancy.org/infertility/in-vitro-fertilization/, and 3) pre-embyro loss occurs at a rate of about fifty percent, meaning miscarriage rates would be double their current number, L.S. COSTANZO, PHYSIOLOGY 458 (3d ed. 2006). For these reasons, the World Health Organization, WORLD HEALTH ORG., EMERGENCY CONTRACEPTION: FACT SHEET (Feb. 2016), http://who.int/mediacentre/factsheets/fs244/en/, and the Department of Health and Human Services (including the National Institutes of Health and the Food and Drug Administration) define pregnancy as starting at implantation. "Pregnancy encompasses the period of time from implantation until delivery." Protection of Human Subjects. 45 CFR § 46.202(f) (2013). "Emergency contraceptive pills are not effective if the woman is pregnant." Prescription Drug Products; Certain Combined Oral Contraceptives for Use as Postcoital Emergency Contraception, 62 Fed. Reg. 8610-01 (1997).

so-called abortifacients do not interfere with pregnancies. "Abortifacient" is therefore a misnomer, so I will refer to Plan B and Ella as "emergency contraceptives" going forward.[16]

In Part I of this Note, I explain the scientific evidence of the mechanisms of different forms of contraception and contrast this misunderstanding with the public understanding. In Part II, I observe how entrenched our misunderstandings of contraception are and ask who is to blame. I explore the failures of the FDA, the Department of Health and Human Services, and the courts to duly consider the evidence of the mechanisms of emergency contraception.

Part III centers on the far-reaching effects of this massive and ongoing public and legal misunderstanding. I provide evidence of how users of contraception are misinformed and stigmatized by rhetoric about abortifacients and consider the impact of misunderstanding on pro-life people who feel complicit in women's use of emergency contraception. I also discuss how the term "abortifacient" has become a convenient tool used to link contraception and abortion, dragging contraception into the embattled politics of abortion. I then connect our failure to reject this propagated misunderstanding to of our age of alternative facts. Law has changed, too, to adapt to our misunderstanding of the mechanics of emergency contraception. Reproductive rights law requires factual analysis, yet courts apply deference to claims about emergency contraception. Religious refusal law is also undergoing unnecessary change to accommodate faith-based claims about the factual question of how contraception works. I conclude by noting the unique opportunity we have to resolve a hotly contested moral and political issue in a way in which no group's rights subsume another's.

[16] Some IUDs are effective as emergency contraceptives and that is why they contested, even though most women who use IUDs use them as a primary, not emergency, form of contraception.

I. THE MECHANISM OF EMERGENCY CONTRACEPTION: FACT & FICTION

The evidence surrounding the mechanism of emergency contraception is clear, though the science is complex and has only become overwhelming in recent years. To understand how the American government and the public came to misunderstand how emergency contraception works, one first needs a basic understanding of conception, so I begin there. I then discuss the different kinds of emergency contraception and compare them to daily contraception and mifepristone, the true abortion pill. Finally, I analyze the strength of the research on the different contraceptives' mechanisms of action, noting that it was not until quite recently that this science became available, and more recently still that its weight has made it irresponsible to ignore.[17]

A. The Process of Conception

In the simplest of frames, there are three stages of human conception: ovulation, fertilization, and implantation.[18]

Ovulation begins when the female brain releases specific hormones which spike in the bloodstream, triggering the release of an egg.[19] At this time, another hormone alters the endometrium, which is the lining of the uterus, in preparation for sperm to implant in the egg and

[17] The evidence presented herein comes from both primary sources, such as scientific papers in peer-reviewed journals, and secondary sources, such as medical textbooks and professional practice guides.
[18] For the purposes of this paper, I aim to keep the explanation simple, but accurate. The human female reproductive system is quite complex and not fully understood, so while the information presented is correct to the best of human knowledge, it is an evolving field. *See generally*, ROBERT A. HATCHER ET AL., CONTRACEPTIVE TECHNOLOGY 70 (20th rev. ed. 2011).
[19] *See* KEITH L. MOORE ET AL., THE DEVELOPING HUMAN: CLINICAL ORIENTED EMBRYOLOGY 20-22 (10th ed. 2016).

the egg to implant in the uterus.[20] If the egg is not fertilized, hormone levels fall, and the endometrium sheds, resulting in menstruation.[21]

Fertilization occurs when a female egg and male sperm meet.[22] Though it is commonly assumed that fertilization takes place during intercourse or very shortly thereafter, it can occur up to five days later.[23] This means that a woman can become pregnant if she ovulates and then has intercourse, or if she has intercourse and then ovulates within the next five days. After the egg and sperm meet, they mature into a blastocyst over an additional five to seven days.[24] (When opponents of emergency contraception say that "life begins at conception," they typically mean at this stage, when the egg is fertilized but not yet implanted.)

The process of implantation then begins. Implantation occurs when the blastocyst burrows into the endometrium and begins to transform into the placenta and embryo.[25] Approximately fifty

[20] *Id.* at 18.
[21] *Id.* at 23-24.
[22] *Id.* at 27-29 (noting that "Fertilization is a complex sequence of coordinated molecular events").
[23] As the fertilization researcher Harvey Florman has said, "Fertilization doesn't take place in a moment of passion. It takes place the next day in the laundromat or the library." Sarah Zhang, *Why Science Can't Say When a Baby's Life Begins*, WIRED, https://www.wired.com/2015/10/science-cant-say-babys-life-begins/. Fertilization can actually occur days after that because sperm can survive in the female body for five days. *Conception: How it Works*, UCSF MEDICAL CENTER, https://www.ucsfhealth.org/education/conception_how_it_works/. However, an egg must be fertilized within 48 hours after it is released. Errol R. Norowitz et. al. *Implantation and the Survival of Early Pregnancy*, 345 NEW ENG. J. MED. 1400-08 (2001), http://www.nejm.org/doi/full/10.1056/NEJMra000763.
[24] A.J. Wilcox, et al., *Timing of Sexual Intercourse in Relation to Ovulation. Effects on Probability of Conception*, 333 NEW ENG. J. MED. 1517 (1995); D.B. Dunson, et al., *Day-Specific Probabilities of Clinical Pregnancy Based on Two Studies with Imperfect Measures of Ovulation*, 14 HUM. REPROD. 1835 (1999). Maturation involves the egg and sperm reducing their combined forty-six chromosomes into the twenty-three necessary to create a human being. KEITH L. MOORE ET AL. THE DEVELOPING HUMAN: CLINICAL ORIENTED EMBRYOLOGY 33 (10th ed. 2016). As the number of chromosomes is halved, cells multiply, eventually resulting in a group of fifty to sixty cells, called a blastocyst. *Id* at 35.
[25] *Id.* at 39. This takes five to nine days.

percent of all fertilized eggs are lost prior to implantation.[26] It is after implantation that most obstetricians and the FDA understand pregnancy to begin.[27]

B. The Physical Functioning of Emergency Contraceptives

Emergency contraceptives are understood to function in the same way as other hormonal contraception, e.g. "the pill."[28] Hormonal contraceptives disrupt the feedback system between the brain and ovaries from properly functioning, thus inhibiting the release of an egg.[29] The hormones in contraceptives also thicken the cervical mucus, which can prevent or delay sperm from reaching an egg.[30]

Because emergency contraception is taken *after* intercourse, there is a perception that emergency contraception works by preventing implantation of a fertilized egg.[31] Emergency contraception, however, functions at most five days after intercourse and "the best available evidence indicates that [emergency contraceptives] prevent pregnancy by mechanisms that do not involve interference with post-fertilization events."[32]

There are three main emergency contraceptive methods. For the purposes of this Note, I will review the evidence on levonorgestrel (sold as Plan B, Norvelo, and Levonelle) and ulipristal

[26] *Conception: How it Works*, UCSF MED. CTR, http://www.ucsfhealth.org/education/conception_how_it_works/. KEITH L. MOORE ET AL., THE DEVELOPING HUMAN: CLINICAL ORIENTED EMBRYOLOGY 49 (10th ed. 2016). Data is limited, but even under optimal conditions and timing, no more than 40% of blastocysts eventually implant in the endometrium; *see* K. Diedrich, et al., *The Role of the Endometrium and Embryo in Human Implantation*, 13 HUM. REPROD. UPDATE 365 (2007). This is one of the reasons that obstetricians do not think that pregnancy begins prior to implantation, because it would mean that there are about twice as many miscarriages happening as we currently understand there to be. *See supra* note 15.
[27] *See supra* note 15.
[28] HATCHER, *supra* note 18, at 121.
[29] *Id.* at 41.
[30] *Id.*
[31] *Id.* at 114.
[32] HATCHER, *supra* note 18, at 121.

acetate (sold as Ella and EllaOne) and the copper IUD (sold as ParaGuard IUD).[33] I also briefly discuss daily hormonal contraceptives and mifepristone to provide additional context.

1. Plan B

Plan B (now sold as Plan B One-Step) is a 1.5mg dose of levonorgestrel initially approved in the United States in 1982.[34] To be effective, Plan B must be taken within seventy-two hours of unprotected sex.[35]

Clinical studies conducted in the early 2000s showed that the primary mechanism of Plan B is to inhibit or delay ovulation, akin to "the pill."[36] Initially, there was not a lot of data on whether Plan B also affects implantation, which would give it an abortifacient effect to those who believe life begins at conception. The first two studies, from the early 2000s, showed Plan B had no implantation effect.[37] A third study in 2005 did suggest an effect, but only by evidence of minor

[33] It is also possible for a woman to take multiple pills (usually four) of a daily contraceptive as emergency contraception. This is called the Yuzpe Method. HATCHER, *supra* note 18, at 114-15.
[34] PLAN B ONE-STEP (LEVONORGESTREL) TABLET, FOOD & DRUG ADMIN. 1. (July 2009). Plan B has been available over-the-counter since 2006. *'Plan B' Gets FDA's Over-the-Counter Approval* (Aug. 4, 2006) NAT'L PUBLIC RADIO. http://www.npr.org/templates/story/story.php?storyId=5705260.
[35] HATCHER, *supra* note 18, at 125.
[36] H.B. Croxatto, et al., *Pituitary-Ovarian Function Following the Standard Levonorgestrel Emergency Contraceptive Dose or a Single 0.75-Mg Dose Given on the Days Preceding Ovulation*, 70 CONTRACEPTION 442-50 (2004); M. Durand et al., *On the Mechanisms of Action of Short-Term Levonorgestrel Administration in Emergency Contraception*, 64 CONTRACEPTION. 227-34 (2001); D. Hapangama D et al., *The Effects of Peri-Ovulatory Administration of Levonorgestrel on the Menstrual Cycle*, 63 CONTRACEPTION, 123-29 (2001); L. Marions et al., *Effect of Emergency Contraception with Levonorgestrel or Mifepristone on Ovarian Function*, 69 CONTRACEPTION. 373-377 (2004); L. Marions et al., *Emergency Contraception with Mifepristone and Levonorgestrel: Mechanism of Action*, 100 OBSTETRIC GYNECOLOGY 65-71 (2002); I.A. Okewole et al., *Effect of Single Administration of Levonorgestrel on the Menstrual Cycle*, 75 CONTRACEPTION. 372-77 (2007).
[37] M. Durand et al., *On the Mechanisms of Action of Short-Term Levonorgestrel Administration in Emergency Contraception*, 64 CONTRACEPTION 227-234 (2001); L. Marions et al., *Emergency Contraception with Mifepristone and Levonorgestrel: Mechanism of Action*, 100 OBSTETRIC GYNECOLOGY 65-71 (2002).

changes in endometrial chemistry, leaving the study's authors to conclude that "it remains uncertain" whether Plan B can affect implantation.[38]

Two further studies designed specifically to assess endometrial chemistry were conducted in 2007 and 2010 and did not confirm the results of the 2005 study.[39] In 2011, in the largest study to date, researchers found that Plan B had no greater effect than a placebo when taken post-ovulation.[40] A 2013 paper collecting all available evidence on the mechanism of action of Plan B overwhelmingly showed that Plan B has no effect on implantation.[41] Dr. Gemzell-Danielsson, who authored the survey study, examined hundreds of data sets and concluded that Plan B has does "not prevent blastocyst attachment and early implantation."[42]

The longer Plan B has stayed on the market, the more evidence has accumulated. The evidence is now conclusive that Plan B works by preventing ovulation and does no harm to an egg that has already released and fertilized. This evidence overwhelmingly shows that Plan B is not an abortifacient.

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[38] M. Durand et al., *Late Follicular Phase Administration of Levonorgestrel as an Emergency Contraceptive Changes the Secretory Pattern of Glycodelin in Serum and Endometrium During the Luteal Phase of the Menstrual Cycle*, 71 CONTRACEPTION 451-57 (2005).
[39] J.A. do Nascimento et al., *In Vivo Assessment of The Human Sperm Acrosome Reaction and the Expression of Glycodelin-A in Human Endometrium After Levonorgestrel-Emergency Contraceptive Pill Administration*, 22 HUM. REPROD. 2190-2195 (2007); W.A. Palomino et al., *A Single Midcycle Dose of Levonorgestrel Similar to Emergency Contraceptive Does Not Alter the Expression of the L-Selectin Ligand or Molecular Markers of Endometrial Receptivity*, 94 FERTILITY & STERILITY 1589-94 (2010); *see also* N. Novikova et al., *Effectiveness of Levonorgestrel Emergency Contraception Given Before or After Ovulation – A Pilot Study*, 75 CONTRACEPTION 112 (2007).
[40] G., Noe et al., *Contraceptive Efficacy of Emergency Contraception with Levonorgestrel Given Before or After Ovulation*, 84 CONTRACEPTION 486–92 (2011).
[41] K. Gemzell-Danielsson et al., *Emergency Contraception—Mechanisms of Action*, 87 CONTRACEPTION 300-08 (2013).
[42] *Id.*

2. Ella

Ella functions very similarly to Plan B. It is a 30mg dose of ulipristal acetate that the FDA approved in August 2010.[43] It is more effective than Plan B and can be taken up to 120 hours after unprotected sex.[44] Because Ella is a newer drug, less evidence has accumulated about its mechanism of action, but studies have shown that, like Plan B, it acts to delay ovulation.[45] Unlike Plan B, Ella is capable of acting when ovulation is imminent, a time in which Plan B is ineffective. [46] This does not mean that Ella works post-ovulation by preventing ovulation, but rather that it works just up until ovulation occurs.[47]

Evidence about a potential implantation effect for Ella is very limited. A 2016 study of potential implantation effects found that Ella only prevented pregnancy among study participants who had not yet ovulated.[48] The chemical structure of Ella led one researcher to speculate that Ella may have an implantation effect,[49] but this idea has never been developed beyond a theory nor has it been demonstrated in a lab with in vitro eggs or in humans.[50] In vitro evidence shows Ella has no implantation effect,[51] as did Dr. Gemzell-Daniellson's 2013 summary of all available evidence

[43] HATCHER, *supra* note 18, at 113, 124.
[44] HATCHER, *supra* note 18, at 124.
[45] V. Brache et al., *Immediate Preovulatory Administration of 30 Mg Ulipristal Acetate Significantly Delays Follicular Rupture*, 25 HUM. REPROD. 2256-63 (2010).
[46] TRUSSELL, *supra* note **ERROR! BOOKMARK NOT DEFINED.**, at 5.
Some have made policy arguments emphasizing this potential mechanism of action. Robin Fretwell Wilson, *The Calculus of Accommodation: Contraception, Abortion, Same-Sex Marriage, and Other Clashes Between Religion and the State*, 53 B.C.L. REV. 1417 (2012). However, the strong weight of the evidence does not suggest a post-implantation effect.
[47] *Id.*
[48] H.W.R. Li et al., *Efficacy of Ulipristal Acetate for Emergency Contraception and its Effect on The Subsequent Bleeding Pattern when Administered Before or After Ovulation*, 31 HUM. REPROD. 1200-07 (2016).
[49] R.P. Miech, *Immunopharmacology of Ulipristal as an Emergency Contraceptive*, 3 INT'L J. WOMEN'S HEALTH 391-97 (2011) OR J.A. Keenan, *Ulipristal Acetate: Contraceptive or Contragestive?*, 45 ANNALS PHARMACOTHERAPY 813-15 (2011).
[50] AM. CONG. OF OBSTETRICIANS & GYNECOLOGISTS. FACTS ARE IMPORTANT: EMERGENCY CONTRACEPTION (EC) AND INTRAUTERINE DEVICES (IUDS) ARE NOT ABORTIFACIENTS (June 12, 2014), http://www.acog.org/-/media/Departments/Government-Relations-and-Outreach/FactsAreImportantEC.pdf.
[51] C. Berger et al., *Effects of Ulipristal Acetate on Human Embryo Attachment and Endometrial Cell Gene Expression in an In Vitro Co-Culture System*, 30 HUM. REPROD. 800-11 (2015).

on Ella's mechanisms.[52] Dr. Gemzell-Daniellson concluded that the effect of Ella's dosage on implantation "was similar to that of placebo."[53] A 2016 study of the pre- and post-ovulatory effects of Ella found not post-ovulatory effect and concluded that "it is clear that EC is not an abortifacient."[54]

Because Ella has not been available as long as Plan B, the evidence with respect to its mechanism of action is more limited. Nevertheless, the evidence is clear that there is very little reason to suspect Ella will impede the implantation of a fertilized egg.

3. Daily Contraception

While the evidence against an implantation effect is very strong with respect to Plan B and quite strong with respect to Ella, skeptics may still harbor doubt and rest their objections on the possibility that the evidence is incorrect. Yet, this sort of doubt should also apply to all forms of hormonal contraception. The birth control pill, the implant, the vaginal ring, the patch, injectable hormones, and even breastfeeding all potentially have post-fertilization effects.[55]

As with emergency contraceptives, there is a possibility that all hormonal contraception can prevent fertilized eggs from implanting in the uterus.[56] All hormonal contraception, including emergency contraception, acts to alter the endometrium and changes the motility in the fallopian tubes, through which sperm and fertilized eggs travel.[57] Studies do not demonstrate this effect, but

[52] Kristina Gemzell-Danielsson, *Emergency Contraception—Mechanisms of Action*, 87 CONTRACEPTION 300-08 (2013).
[53] *Id*.
[54] H.W.R. Li et al., *Efficacy of Ulipristal Acetate for Emergency Contraception and its Effect on The Subsequent Bleeding Pattern when Administered Before or After Ovulation*, 31 HUM. REPROD. 1200-07 (2016).
[55] HATCHER, *supra* note 18, at 121.
[56] *Id*.
[57] *Id*; Roberto Rivera et al., *The Mechanism of Action of Hormonal Contraceptives and Intrauterine Contraceptive Devices*, 181 AM. J. OBSTETRICS & GYNECOLOGY 1263-69 (1999).

it is of course still possible. In fact, there may be a greater possibility that daily contraceptives affect implantation than emergency contraceptives because a daily dose of hormones over a long period of time is more likely to have an effect in the body than a single dose.[58]

Of course, it is unlikely that all contraceptives and breastfeeding are actually abortifacients. Research measuring the rate at which fertilized eggs fail to implant shows that women who use contraception are no more likely than those who do not to have a fertilized egg not implant.[59] This strongly suggests that contraception is not affecting implantation. While is not scientifically possible to rule out that all of these contraceptive methods, including breastfeeding, inhibit the implantation of a fertilized egg, the best information available is that no contraceptives have this mechanism.[60]

Plan B and Ella ought not to be called abortifacients because an implantation effect has not been shown with evidence, and any evidence that does exist indicates emergency contraception is no different than hormonal contraception.

4. Copper IUD

The copper IUD is another form of emergency contraceptive, but it is far less commonly used than Plan B or Ella.[61] The copper IUD somewhat complicates the picture of emergency

[58] I was told this by Dr. Meredith Pensak, a family planning fellow at Yale Hospital, who provided guidance on the scientific aspects of this paper and confirmed their medical accuracy.
[59] Mary K. Collins, *Conscience Clauses and Oral Contraceptives: Conscientious Objection or Calculated Obstruction*, 25 ANNALS HEALTH L. 37 (2006) (showing that research does not show a higher rate of pre-embryo loss in women who use contraceptives than those who do not).
[60] TRUSSELL, *supra* note **ERROR! BOOKMARK NOT DEFINED.**, at 5; *see also*, Christina Cauterucci, *Why Aren't More Young Women Choosing Set-It-and-Forget-It IUDs?* SLATE, May 12, 2016, http://www.slate.com/blogs/xx_factor/2016/05/12/why_aren_t_more_young_women_choosing_iuds.html.
[61] The copper IUD is both a long-term contraceptive and effective emergency contraception. A study of California family planning clinicians found that eighty-five percent do not recommend insertion of a copper IUD as emergency contraception. Cynthia Harper et al., *Copper Intrauterine Device for Emergency Contraception: Clinical Practice Among Contraception Providers*, 119 OBSTETRICS & GYNECOLOGY 220-226 (Feb. 2012). However, the Copper IUD is more than 99% effective, which is substantially more effective than emergency contraception pills. The reluctance

contraception's implantation effects. Insertion of the copper IUD to prevent pregnancy works in 99% of cases, suggesting that the copper IUD has very strong mechanisms of action, including inhibiting the implantation of a fertilized egg. [62] If one believes that pregnancy starts at fertilization, the copper IUD may be considered a true "abortifacient."

5. Mifepristone

The pharmaceutical with an undisputed abortifacient effect is RU-486, also called mifepristone.[63] Physicians use mifepristone to end pregnancies up to 70 days after intercourse, long after fertilization and implantation.[64]

C. The Myth of Abortifacients

Despite the evidence that emergency contraception does not cause abortions, pro-life groups characterize Plan B and Ella as abortifacients equivalent to mifepristone. Americans United for Life asserts that "Plan B . . . can kill an embryo,"[65] while other conservatives claim that

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of clinicians to offer copper IUDs for emergency contraception is thought to arise from lack of training on IUD insertion, expense, women preferring not to have a long-term method of birth control, and lack of information. Peter Belden et al., *The Copper IUD for Emergency Contraception, a Neglected Option*, 85 CONTRACEPTION 338-339 (Apr. 2012).

[62] TRUSSELL, *supra* note **ERROR! BOOKMARK NOT DEFINED.**, at 5; M. E. Ortiz & H. B. Croxatto, *Copper-T Intrauterine Device and Levonorgestrel Intrauterine System: Biological Bases of Their Mechanism of Action*, 75 CONTRACEPTION S16–S30; J.B. Stanford & R.T. Mikolajczyk, *Mechanisms Of Action Of Intrauterine Devices: Update And Estimation Of Postfertilization Effects*, 187 AM. J. OBSTETRIC GYNECOLOGY 1699–1708 (2002).

[6363] This is actually dose-dependent. In the United States, mifepristone is used as an abortifacient, but in China low doses of mifepristone are used as emergency contraception. Linan Chang & Clarine van Oel, *Interventions for Emergency Contraception*, Cochrane Database of Systematic Reviews 2004, Issue 3.

[64] L. Marions et al., *Effect of Emergency Contraception with Levonorgestrel or Mifepristone on Ovarian Function*, 69 CONTRACEPTION. 373-377 (2004); L. Marions et al., *Emergency Contraception with Mifepristone and Levonorgestrel: Mechanism of Action*, 100 OBSTETRIC GYNECOLOGY 65-71 (2002).

[65] *Back Door Abortion Mandate*, AM. UNITED FOR LIFE, http://www.aul.org/2010/11/back-door-abortion-mandate-in-health-care-reform/.

emergency contraception is "abortion-inducing."[66] The *Weekly Standard* was among those who called the Affordable Care Act's (ACA's) required coverage of contraception an "Abortion Drug Mandate" because it includes emergency contraception,[67] and the American Association of Pro-Life Obstetricians and Gynecologists filed an amicus brief in *Hobby Lobby* on behalf of the employers seeking to restrict the ACA's contraception coverage.[68] Politicians have similarly called emergency contraception "abortive pills."[69]

Few attempts have been made to combat this misinformation.[70] News sources have addressed the issue sporadically and litigants have generally avoided delving into the science.[71] As I show in Part II, this is largely driven by the government's reinforcement of the pro-life position.

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[66] *See, e.g.*, Sarah Torre, *Obama Administration's Eighth Try on HHS Mandate and Religious Liberty Still Fails*, DAILY SIGNAL (Aug. 22, 2014), http://dailysignal.com/2014/08/22/obama-adminstrations-eighth-try-hhs-mandate-religious-liberty-still-fails; The Life Institute, Abortifacients: An Overview, Sept. 29, 2014, http://www.lifeissues.org/2014/09/abortifacients-overview/. *But see* Life Training Institute Blog, *Plan B EC: No Morphological Changed Found in Endometrium* (Sept. 1, 2006), http://lti-blog.blogspot.com/2006/12/plan-b-ec-no-morphological-changes.html.

[67] *Taxpayer Funding of Abortion in Obamacare*, SBA LIST, https://www.sba-list.org/taxpayer-funding-aca; Americans United for Life, Back Door Abortion Mandate in Health Care Reform, http://www.aul.org/blog/back-door-abortion-mandate-in-health-care-reform/; *see also* John McCormack, *Obamacare Will Mandate Free Coverage of Abortion Drug & Contraception Without Religious Exemption*, WEEKLY STANDARD (Jan. 20, 2012), http://www.weeklystandard.com/obamacare-will-mandate-free-coverage-of-abortion-drug-contraception-without-religious-exemption/article/617361.

[68] Brief for Am. Ass'n of Pro-Life Obstetricians & Gynecologists as Amici Curiae Supporting Plaintiff-Appellants, Conestoga Wood Specialties Corp., v. Sebelius, 724 F.3d 377 (3d Cir. 2013), 2013 WL 1308491.

[69] Ashley Parker, *Romney Attacks Obama on Birth Control Rule*, N.Y. TIMES (Feb. 6, 2012), https://thecaucus.blogs.nytimes.com/2012/02/06/romney-attacks-obama-on-birth-control-rule/.

[70] A notable exception is Priscilla Smith's work. Priscilla J. Smith, *Contraceptive Comstockery: Reasoning from Immorality to Illness in the Twenty-First Century*, 47 CONN. L. REV 974, 1012-17; *see also*, Joerg Dreweke, Contraception Is Not Abortion: The Strategic Campaign of Antiabortion Groups to Persuade the Public Otherwise, 17 GUTTMACHER INST. POL'Y REV. 15 (2014), https://www.guttmacher.org/pubs/gpr/17/4/gpr170414.pdf.

[71] *See, e.g.*, Pam Belluck, *Abortion Qualms on Morning-After Pill May Be Unfounded*, N.Y. TIMES (June 5, 2012), http://www.nytimes.com/2012/06/06/health/research/morning-after-pills-dont-block-implantation-science-suggests.html.

II. MISSTEPS ACROSS THE BRANCHES OF GOVERNMENT

Emergency contraception has been misunderstood by every branch of government to touch it. The Department of Health and Human Services and the federal courts treat emergency contraception as abortion inducing, typically citing the Food & Drug Administration's labeling of Plan B. In this Part I look at Plan B's history at the FDA, the Trump Administration's new rules exempting those with religious or moral objections from providing contraception coverage, and two Supreme Court cases that relied on inaccurate factual understandings of the mechanisms of emergency contraception. What emerges is a story of how this misunderstanding pervades government and, in turn, perpetuates the error.

A. Fumbles at the FDA

The FDA requires that the Plan B labeling state that it "will not work if you are already pregnant and will not affect an existing pregnancy," "there is no medical evidence that Plan B [] would harm a developing baby," and also that Plan B "works mainly by stopping the release of an egg from the ovary."[72] Yet, the labeling also claims that, "[I]t is possible that preventing fertilization of an egg (the uniting of sperm with the egg) or by preventing attachment (implantation) to the uterus (womb)," is a function of Plan B.[73] The labeling thus gives two mechanisms of action for Plan B, one that remains supported by scientists and one that is outdated and misleading.

The FDA first approved Plan B in 1999, when scientists did not fully understand how the drug works.[74] The FDA wrote the labelling to encompass all possible potential mechanisms of

[72] PLAN B ONE-STEP (LEVONORGESTREL) TABLET. FOOD & DRUG ADMIN., 1. (July 2009).
[73] *Id.*
[74] *See supra* Section I.b.1.

action, likely at the behest of the manufacturer. Multiple mechanisms suggested the drug was more effective, which would have been seen as an asset for this new pharmaceutical.

Yet, as new studies came to light showing that Plan B only has one mechanism, the FDA did not update the label. The FDA requires that drug mechanisms be accurately described,[75] but pharmaceutical labels are rarely updated due to expense. Plan B's manufacturer nevertheless sought to update the label, but the FDA denied the request without public explanation.[76]

Starting in the early 2000s and lasting through the Obama Administration, the FDA was caught in another controversy over Plan B. Plan B's manufacturer sought to make Plan B available over the counter, but politicians in Congress and elsewhere resisted.[77] The FDA committee tasked with making an advisory decision voted overwhelmingly in favor of the change, seeing few risks to women's health and significant benefits in reducing the time between intercourse and the dose.[78] The FDA, however, rejected the recommendation, causing the agency's director of women's health to resign in protest.[79] A court found the FDA "acted in bad faith and in response to political pressure" by "repeatedly and unreasonably delaying issuing a decision on Plan B" and restricting access based on "fanciful and wholly unsubstantiated 'enforcement' concerns."[80] The decision

[75] "[O]nly reasonably well-characterized mechanisms should be described, and care must be taken to avoid speculative and undocumented suggestions of therapeutic advantages." https://www.fda.gov/downloads/Drugs/GuidanceComplianceRegulatoryInformation/Guidances/UCM109739.pdf
[76] Pam Belluck, *Abortion Qualms on Morning-After Pill May Be Unfounded*, N.Y. TIMES (June 5, 2012) http://www.nytimes.com/2012/06/06/health/research/morning-after-pills-dont-block-implantation-science-suggests.html.
[77] Leslie C. Griffin, *Conscience and Emergency Contraception*, 6 HOUSTON J. HEALTH L. & POL'Y 6 299, 307-308 (2005); Alastair J.J. Wood et al., *A Sad Day for Science at the FDA*, 353 NEW ENG. J. MED. 1197-99 (2005).
[78] Dana Sussman & Marcia M. Boumil, *Emergency Contraception: Law, Policy & Practice*, 7 CONN. PUBLIC L. J. 2, 8 (2008).
[79] Susan F. Wood, When Politics Defeats Science, WASH. POST, Mar. 1, 2006, http://www.washingtonpost.com/wp-dyn/content/article/2006/02/28/AR2006022801027.html; Susan F. Wood, *The Role of Science in Health Policy Decision-Making: The Case of Emergency Contraception*, 17 Health Matrix 273, 290 (2007); Erica S. Mellick, *Time for Plan B: Increasing Access to Emergency Contraception and Minimizing Conflicts of Conscience*, Comment, 9 J. OF HEALTH CARE LAW & POLICY 402, 408-10.
[80] Tummino v. Torti, 603 F. Supp. 2d 519, 546 (E.D.N.Y. 2009) amended sub nom. Tummino v. Hamburg, No. 05-CV-366 ERK VVP, 2013 WL 865851 (E.D.N.Y. Mar. 6, 2013). The GAO also issued a report in 2005 similarly

specifically noted "pressure emanating from the White House" and "the obvious connection between the confirmation process of two FDA Commissioners and the timing of the FDA's decisions."[81] The court therefore ordered that the FDA make Plan B available over the counter. Health and Human Services (HHS) Secretary Sebelius ignored the instruction and directed the FDA Commissioner to deny over-the-counter status to Plan B for women under the age of seventeen.[82] Hours before a hearing to hold Secretary Sebelius in contempt, the FDA denied over the counter status to Plan B for *all* users.[83] After another court order,[84] the FDA finally acquiesced and made Plan B available over the counter to girls fifteen years old and over.[85]

European regulators have updated the labeling of Norvelo, the European version of Plan B, to state that the drug "cannot stop a fertilized egg from attaching to the womb."[86] The FDA has made no similar attempt to update Plan B's labeling. Political influence and intervention into FDA decisions regarding Plan B calls into question whether failure to update the labeling is a result of bureaucratic inertia or political malfeasance.[87]

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found agency bad faith. U.S. GOV'T ACCOUNTABILITY OFFICE, GAO-06-109, FOOD AND DRUG ADMINISTRATION: DECISION PROCESS TO DENY INITIAL APPLICATION FOR OVER-THE-COUNTER MARKETING OF THE EMERGENCY CONTRACEPTIVE DRUG PLAN B WAS UNUSUAL (2005).

[81] Tummino, 603 F. Supp. 2d at 544.

[82] Press Release, FDA, Statement from FDA Commissioner Margaret Hamburg, M.D. on Plan B One-Step (Dec. 7, 2011), http://www.fda.gov/NewsEvents/Newsroom/ucm282805.htm.

[83] *See* Letter from Janet Woodcock, Dir., Ctr. for Drug Evaluation & Research, to Bonnie Scott Jones, Ctr. for Reprod. Rights 10 (Dec. 12, 2011), http://www.regulations.gov/#!documentDetail;DFDA- 2001-P-0123-0186.

[84] Tummino v. Hamburg (Tummino II), 936 F. Supp. 2d 162, 171–74 (E.D.N.Y. 2013).

[85] Press Release, FDA, FDA Approves Plan B One-Step Emergency Contraceptive Without a Prescription for Women 15 Years of Age and Older (Apr. 30, 2013), http://www.fda.gov/newsevents/newsroom/pressannouncements/ucm350230.htm. It was thought at the time that making Plan B available over the counter would decrease stigma, Erica S. Mellick, *Time for Plan B: Increasing Access to Emergency Contraception and Minimizing Conflicts of Conscience*, 9 J. Health Care L. & Pol'y 402, 440 (2006). This does not seem to have been the result.

[86] PLAN B ONE-STEP (LEVONORGESTREL) TABLET. FOOD & DRUG ADMIN. 1. (July 2009).

[87] The FDA has also failed to update the labeling and dosing information for RU-486, the pill actually used to induce abortion. *See* Michael F. Greene & Jeffrey Drazen, *A New Label for Mifepristone*, 374 NEW ENG. J. MED 2281-82 (2016).

Due to the label's inaccuracy, the National Institutes of Health and the Mayo Clinic, institutions that typically follow FDA guidance, no longer follow the FDA's Plan B labeling.[88] Pro-life groups[89] and the Department of Health and Human Services (HHS) new Office of Civil Rights,[90] however, cite the labeling as the strongest evidence of Plan B's mechanisms.

B. The Trojan Horse Contraceptive Mandate Rollback

On October 6, 2017, HHS issued two interim final rules providing for religious and moral exemptions and accommodations for insurance coverage of contraception.[91] The Affordable Care Act requires by law that insurers cover women's preventive services.[92] This has been interpreted by regulation to include emergency contraception, among other kinds of contraception. Following an Executive Order from President Trump calling religious liberty "Americans' first freedom," [93] the new rules limit the preventative-care mandate by exempting insurers with religious and moral objections to contraception. To do so, they rely on emergency contraception myth.

[88] Pam Belluck, *Abortion Qualms on Morning-After Pill May Be Unfounded*, N.Y. TIMes (June 5, 2012) http://www.nytimes.com/2012/06/06/health/research/morning-after-pills-dont-block-implantation-science-suggests.html.
[89] William Sunders & Mailee Smith, *Emergency "Contraception" Can End the Life of a Unique Human*, LIFENEWS (May 9, 2013) http://www.lifenews.com/2013/05/09/emergency-contraception-can-end-the-life-of-a-unique-human-being/; CHRISTOPHER M. GACEK, NATIONAL FAMILY RESEARCH COUNCIL, CONCEIVING "PREGNANCY" U.S. MEDICAL DICTIONARIES AND THEIR DEFINITIONS OF "CONCEPTION" AND "PREGNANCY" (APRIL 2009) http://downloads.frc.org/EF/EF09D12.pdf.
[90] *See infra* section I.b.
[91] Religious Exemptions and Accommodations for Coverage of Certain Preventive Services Under the Affordable Care Act, 82 Fed. Reg. 47,792; Moral Exemptions and Accommodations for Coverage of Certain Preventive Services Under the Affordable Care Act, 82 Fed. Reg. 47,838.
[92] 42 U.S.C. §300gg-13(a)(4).
[93] Exec. Order No. 13798, 82 Fed. Reg. 21,675 (May 4, 2017) (directing agencies to "consider issuing amended regulations, consistent with applicable law, toa ddress conscience-based objection to the preventive-care mandate promulgated under [the Women's Health Amendment]").

The interim final rules were over two hundred pages in length, yet devoted a mere footnote to explain opposition to contraception.[94] HHS stated that the contraceptive mandate covered all FDA-approved contraceptives, and "[b]ecause FDA includes in the category of 'contraceptives' certain drugs and devices that may not only prevent conception (fertilization), but may also prevent implantation of an embryo," the mandate "included several contraceptive methods that many persons and organizations believe are abortifacient—that is, as causing early abortion—and which they conscientiously oppose for that reason." The assertion that some contraceptive drugs may prevent the implantation of an egg is supported by a citation to the FDA's website. The website, following the labeling, states that Plan B, Ella, and the copper IUD may stop the implantation of a fertilized egg.[95]

The interim final rules therefore relied on the FDA's outdated label. The Administration went further than the FDA though, permitting employers not just to avoid provision of emergency contraception, but every other form of contraception too. The interim final rules cited no evidence of abortifacient effects of daily contraception like the pill or the patch, yet under the new rules, employers and others will be able to claim religious and moral objections to these forms of contraception. While some people may have religious or moral opposition to non-procreative sex and thus object to all forms of contraception, the interim final rules do not follow that line of

[94] Religious Exemptions and Accommodations for Coverage of Certain Preventive Services Under the Affordable Care Act, 82 Fed. Reg. 47,792 n.7; Moral Exemptions and Accommodations for Coverage of Certain Preventive Services Under the Affordable Care Act, 82 Fed. Reg. 47,838 n.7. ("FDA's guide "Birth Control: Medicines to Help You," specifies that various approved contraceptives, including Levonorgestrel, Ulipristal Acetate, and IUDs, work mainly by preventing fertilization and "may also work . . . by preventing attachment (implantation) to the womb (uterus)" of a human embryo after fertilization. Available at https://www.fda.gov/forconsumers/byaudience/forwomen/freepublications/ucm313215.htm.")

[95] FDA's guide "Birth Control: Medicines to Help You," https://www.fda.gov/forconsumers/byaudience/forwomen/freepublications/ucm313215.htm

reasoning. Indeed, the rules repeatedly cites *Hobby Lobby* and other emergency contraception cases but reason from them that all forms of contraception can be excluded from health plans.[96]

The final rules were published on November 15, 2018.[97] In response to comments from the public disputing that some of the forms of contraceptives were abortifacient, HHS stated that, "objection on this issue appears to be partially one of semantics" and the differing definitions of contraception and pregnancy.[98] "The Departments do not take a position on the scientific, religious, or moral debates on this issue," the regulations contend, but "[t]he Supreme Court has already recognized that such a view can form the basis of a sincerely held religious belief," as does "FDA's statement that some contraceptives may prevent implantation."[99] As will be discussed below, the Supreme Court also relied on the FDA's labeling. HHS's justification for the regulations repeatedly circle around the FDA label like a dog chasing its tail.

The Administration's failure to distinguish between emergency and non-emergency contraception capitalizes on the FDA's labeling errors to enable widespread opposition to contraception. The rules provide no independent legal basis for accommodating opposition to all forms of contraception, instead relying on the Trojan horse of emergency contraception.

Litigation in response to the regulations has failed to confront the issue. On October 6, 2017, the day the new rules were issued, three lawsuits were filed against HHS, the Department of

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[96] *See, e.g.*, Religious Exemptions and Accommodations for Coverage of Certain Preventive Services Under the Affordable Care Act, 82 Fed. Reg. 47,792 at 11, 20, 21, 22, 28, 31, 32, 34, 35, 49, 53, 54, 57, 67, 68, 82, 89, 93, 94, 96, 110; Moral Exemptions and Accommodations for Coverage of Certain Preventive Services Under the Affordable Care Act, 82 Fed. Reg. 47,838 at 11, 19, 20, 35, 38, 39, 41, 50, 54.

[97] *Religious Exemptions and Accommodations for Coverage of Certain Preventive Services Under the Affordable Care Act*, 83 Fed. Reg. 57,536, 57,536 (Nov. 15, 2018) ("Final Religious Exemption"); *Moral Exemptions and Accommodations for Coverage of Certain Preventive Services Under the Affordable Care Act*, 83 Fed. Reg. 57,592, 57,592 (Nov. 15, 2018) ("Final Moral Exemption").

[98] 83 Fed. Reg. 57,536 at 57,554.

[99] *Id. See also* n. 39 at 57,554 (citing the FDA).

Labor and the Department of the Treasury, which had jointly issued the rule.[100] Within four days, three additional complaints were filed.[101] The complaints contend that the rules violate the Administrative Procedure Act (APA), the Equal Protection Clause, Due Process, the Establishment Clause, and anti-discrimination statutes. However, none of the complaints address the lack of a factual basis for the regulations. Rulings from the Eastern District of Pennsylvania and the Northern District of California enjoined the regulation under the APA, but made no reference to the underlying scientific issue.[102]

Yet, under the APA, regulations must be supported by sufficient evidence. "The agency must explain the evidence which is available, and must offer a 'rational connection between the facts found and the choice made,'"[103] because it is critical that "administrative legitimacy be premised on the transparent demonstration that power is being exercised on the basis of knowledge."[104] The Administration's use of the false controversy over emergency contraception to reduce access to all forms of contraception does not meet this rationality requirement.[105] Yet litigants and the district courts have not recognized this argument.

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[100] Complaint, California v. Wright, No. 05783 (N.D. Cal. Oct 6, 2017); Complaint, Am. Civil. Lib. Union v. Wright, No. 05772 (N.D. Cal. Oct 6, 2017); Complaint, Massachusetts v. U.S. Dep't Health & Hum. Serv., No. 11930 (D. Mass Oct 6, 2017).

[101] Complaint, Pennsylvania v. Trump, No. 05783 (E.D. Penn.); Complaint, Med. Students for Choice v. Wright, (D.D.C.); Complaint, Washington v. Trump, No. 01510 (W.D. Wash. Oct 9, 2017).

[102] Pennsylvania v. Trump, __ F. Supp. 3d ___ (E.D. Penn 2019), 2019 WL 190324; California v. Health & Human Servs., __F. Supp. 3d ___ (N.D. Cal. 2019), 2019 WL 178555.

[103] Motor Vehicle Manufacturers Ass'n of U.S. Inc. v. State Farm Mutual Automobile Insurance Co., 463 U.S. 29, (1983) (citing *Burlington Truck Lines, Inc. v. United States*, 371 U.S., at 168).

[104] Jerry Louis Mashaw, *The Story of Motor Vehicle Manufacturers Association of the U.S. v. State Farm Mutual Automobile Insurance Co.: Law, Science and Politics in the Administrative State*, in ADMINISTRATIVE LAW STORIES, 2005.

[105] *See generally* Timothy Jost & Katie Keith, *Trump Administration Regulatory Rebalancing Favors Religious and Moral Freedom Over Contraceptive Access,* HEALTH AFFAIRS BLOG, Oct. 7, 2016), http://healthaffairs.org/blog/2017/10/07/trump-administration-regulatory-rebalancing-favors-religious-and-moral-freedom-over-contraceptive-access/.

C. The Courts

If past practice offers any prediction, such arguments would not have been successful. Litigation over emergency contraception has repeatedly failed to take into account the mechanism of emergency contraception, twice altering the outcomes of controversial cases. In this Section I will address how two of the most significant legal challenges to contraception in recent years have been based on incorrect assumptions about the mechanism of emergency contraception. The courts' failures to correct litigants' errors have gone unaddressed.

1. Stormans

In 2015, the Ninth Circuit decided the closely-watched case of *Stormans v. Wiesman*, basing the decision on an incorrect understanding of how emergency contraception functions. The Justices who dissented from the Supreme Court's denial of certiorari did not catch the error.

Stormans v. Wiesman arose out of the refusal of Washington State pharmacists to deliver Plan B and Ella to their customers based on their religious objections to abortion and their belief that Plan B and Ella cause abortion. The pharmacists' refusal violated the rules promulgated by the Washington State Pharmacy Quality Assurance Commission that require pharmacies to deliver all prescription medications.[106]

In the litigation, both parties focused on the pharmacists' rights under the Free Exercise clause. The pharmacists' beliefs—beliefs about the morality of abortion *and* about the mechanisms of Plan B and Ella—were therefore not investigated by the court. Under the Free Exercise, courts do not interrogate the veracity of religious beliefs, so the parties agreed to exclude evidence on the mechanisms of emergency contraception.

[106] *See* Wash. Admin. Code § 246-869-150(1); Wash. Rev. Code § 18.64.005(7).

However, Judge Graber ultimately ruled there was not a valid Free Exercise claim and decided the case on due process grounds. The disposal of the Free Exercise issue revived the need for evidentiary support of the pharmacists' claims about the mechanisms of Plan B. Yet, the parties had decided to exclude that evidence.[107] The court purported to treat the pharmacists' position on the mechanism of Plan B and Ella as a belief,[108] but never confirmed that there was a factual basis for the dispute.[109] A correct understanding of Plan B and Ella would have led the conclusion that the pharmacists had no standing to object to supplying the contraceptives.

The Supreme Court did not catch the Ninth Circuit's mistake. Justice Alito dissented from the Court's denial of certiorari, joined by the Chief Justice and Justice Thomas, focusing again on the Free Exercise claim.[110] The dissent characterized the case as a contest between an intolerant state and pharmacists discriminated against because of their religious beliefs.[111] Though this position did not garner enough votes to grant certiorari in *Stormans*, Justice Alito encouraged other

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[107] The plaintiffs and the State had initially assumed the case would be decided on Free Exercise grounds, they had agreed to exclude evidence on the mechanisms of emergency contraception. Once the case shifted to a due process matter, however, the State submitted in a brief:

> It would be essential in this case to know when life begins and, if it begins upon fertilization, whether Plan B and ella actually prevent the implantation of a fertilized egg. If the scientific answer is that 'life' does not begin upon conception or implantation or that Plan B and ella do not prevent the implantation of fertilized egg, then the new right sought by Plaintiffs would not be implicated by the delivery of Plan B or ella, because no human life is being taken. Deciding these issues in this case is impossible because the record contains no scientific evidence—or any evidence whatsoever—addressing these questions.

State Appellants' Reply Brief, Stormans, Inc v. Selecky, (9th Cir.) (Nos. 12-35221, 12-35223), 2012 WL 6801853, at *48-50.

[108] "Whether the drugs at issue prevent implantation of a fertilized ovum, however, strikes us as a proper subject for a finding of fact. Nevertheless, Plaintiffs declined to introduce evidence on that point, so we address Plaintiffs' claim as presented—which rests on their 'belief' that the drugs prevent implantation." Stormans, Inc. v. Wiesman, 794 F.3d 1064, 1087 n.14 (9th Cir. 2015).

[109] The *Stormans* trial court wrote, "Plaintiffs have reviewed the labeling, FDA directives and other literature regarding the mechanism of action of Plan B and ella ('emergency contraceptives') and believe that emergency contraceptives can prevent implantation of a fertilized ovum. Accordingly, Plaintiffs' religious beliefs forbid them from dispensing these drugs." Stormans, Inc. v. Selecky, 854 F. Supp. 2d 925 at 932 (2012). The Ninth Circuit similarly wrote that "plaintiffs believe that dispensing these drugs 'constitutes direct participation in the destruction of human life.'" Stormans v. Wiesman at 1073 n.1.

[110] Stormans v. Wiesman, 136 S. Ct. 2433, 2435 (2016), *cert. denied*, (Alito, J., dissenting).

[111] "There is much evidence that the impetus for the adoption of the regulations was hostility to pharmacists whose religious beliefs regarding and abortion and contraception are out of step with the prevailing opinion in the state." *Id*. at 2433.

challenges to the Washington regulation.[112] In doing so, he elided the factual dispute, writing instead simply that "emergency contraceptives, such as Plan B, . . . can 'inhibit implantation' of a fertilized egg."[113] Justice Alito at times refers to this as a belief,[114] but also states it as fact,[115] though in the district court it was merely stipulated.[116] The Supreme Court thus did not resolve the procedural error, instead focusing on the religious and cultural conflicts that are so often central to contraception debates.

The Ninth Circuit and the Supreme Court ought to have remanded *Stormans* to the district court to resolve the underlying factual issue in the case. Had this occurred, plaintiffs would have been found to not have an identifiable harm and thus would not have had standing to sue the State of Washington. The courts' error, like the FDA's error and the Administration's error, contributed to the propagation of misinformation about contraception. The effects of this will be considered in depth below.[117]

2. Hobby Lobby

The *Hobby Lobby* litigation was plagued by the same error as in *Stormans*, though the issue arose in a different doctrinal landscape.

In *Hobby Lobby*, employers objected to the ACA requirement that the health insurance they supplied to their employees include coverage of contraceptives that the employers believed to be abortifacients.[118] The employers believed supplying the contraceptives would make them

[112] *See id*., at 2440 n.6.
[113] *Id*. at 2433.
[114] *See, e.g*., id. at 2433, 2439.
[115] Stormans v. Wiesman, 136 S. Ct. 2433 (2016), *cert. denied*, (Alito, J., dissenting) at 2433.
[116] *See supra* note 107.
[117] *See infra* Part III.B.
[118] *Id*. at 2752.

complicit in abortion, contrary to their religious beliefs.[119] Unlike *Stormans*, a state law case, *Hobby Lobby* involved federal law and was thus decided on conscience grounds. This meant that the courts did not question the sincerity of the plaintiffs' asserted religious beliefs about the morality of abortion and beliefs about the mechanisms of contraception.[120]

While it is standard to defer to plaintiff's spiritual or religious beliefs about the acceptability of an act like abortion, *Hobby Lobby* was the first time that the Court granted deference to a plaintiff's religious belief about a factual issue. American courts have long held that is not within their duty to question where an individual "dr[aws] the line" in defining which practices run afoul of her religious beliefs.[121] They have not, however, addressed what standard to apply to plaintiffs who miss-define what those practices are. For example, courts defer when a plaintiff states that peyote is an important part of Native American spiritual ritual,[122] but not when the plaintiff claims protection for smoking marijuana that he mistakenly believes to be peyote. I return to this in Section III.D.2.

Given the very strong evidence against the *Hobby Lobby* plaintiffs' belief in the functioning of emergency contraception, this doctrinal change toward unlimited deference to religious beliefs about factual issues was outcome-determinative. As in *Stormans*, *Hobby Lobby* would have been dismissed at the trial court for lack of standing had the deciding court not deferred to the plaintiff's mistaken beliefs. In Section III.D.2 I explore the legal implications of granting deference to religious beliefs about factual questions that contradict scientific consensus.

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[119] *Id*. at 2752.
[120] Burwell, 134 S. Ct. 2760, 2775; *see also* Thomas v. Review Board of the Indiana Employment Security Division, 450 U.S. 707, at 715 (1981) (courts are not to question where an individual "dr[aws] the line" in defining which practices run afoul of her religious beliefs).
[121] Thomas v. Review Board of the Indiana Employment Security Division, 450 U.S. 707, at 715 (1981).
[122] Emp't Div. v. Smith, 494 U.S. 872 (1990) (Smith II).

III. IMPLICATIONS

The contraception confusion that permeates government is not without consequence. Public misunderstanding, lower rates of use, and stigma are predictable but overlooked results of these political errors. Rhetoric about "abortifacients" has pulled contraception into the contested space that abortion occupies, fueling culture wars antagonism and the shift to alternative facts. Law has begun to morph, too. Reproductive rights law is failing to adhere to the promise of *Whole Woman's Health*, Free Exercise is applied to facts as well as beliefs, and due process is threatening to impede the long-held right to defend life as one wishes.

A. Education, Use & Stigma

The public's understanding about emergency contraception mirrors the government's, leaving room for improvement. Education about the mechanisms of emergency contraception has the ability to help women prevent unwanted pregnancies while also reducing the complicity concerns of employers, pharmacists, and others who fear that they are taking part in abortion when women receive emergency contraception. This dual effect is also likely to decrease stigma surrounding contraception.

Studies measuring women's knowledge of emergency contraception have generally found that the vast majority of women have heard of emergency contraception.[123] Yet, a small minority

[123] Cynthia H. Chuang, *Emergency Contraception Knowledge Among Women in a Boston Community*, 71 CONTRACEPTION 157-60 (2005) http://www.sciencedirect.com/science/article/pii/S0010782404002343 (documenting that 82% of participants have heard of emergency contraception, but only 51% of Latina women and 75% of Black women having heard of EC compared with 99% of White women). Patricia O. Corbett et al., *Emergency Contraception: Knowledge and Perceptions in a University Population*, 18 J. AM. ASS'N NURSE

of women know how emergency contraception functions.[124] One study found that only 39% of women believe that emergency contraception works by preventing pregnancy.[125] Another study found that just 24% of women correctly believe emergency contraception works before the sperm and egg meet.[126] In the latter study, more women thought emergency contraception functions after implantation than answered that they did not know.[127] There is thus not only an opportunity to teach what is not known, but to counter false confidence in wrong beliefs.

Education to correct misunderstandings is likely to increase the number of women willing to use emergency contraception. In one study examining why emergency conception use is so low among Latino women in the United States, researchers found that among women who had heard of emergency contraception, willingness to use it depended on whether those women knew the mechanism.[128] Knowing how emergency contraception works was a significantly more important factor than the woman's religious background.[129] Direct survey responses similarly show that willingness to use emergency contraception depends on the mechanism of action.[130] While some women are never willing to use it (11%), and some say they will use it whatever the mechanism is (18%), more care that it works before the sperm and egg join (20%) and before implantation occurs (18%).[131]

PRACTITIONERS 161-68 (2006) (documenting that 75% of college-age respondents knew of a post-coital method to prevent pregnancy and 96% have heard of emergency contraception).

[124] For discussion of misunderstandings of the functioning of emergency contraception in popular culture, see Hazel Cills, *Film and TV Have No Idea How the Abortion Pill Works*, JEZEBEL (May 11, 2018), https://themuse.jezebel.com/film-and-tv-have-no-idea-how-the-abortion-pill-works-1825891382.

[125] Chuang, *supra* note 123.

[126] J.W. Campbell et al., *Attitudes and Beliefs About Emergency Contraception Among Patients at Academic Family Medicine Clinics*, 6 ANNALS FAM. MED. S23-S27 (2008).

[127] *Id*.

[128] Laura F. Romo et al., *The Role of Misconceptions on Latino Women's Acceptance of Emergency Contraceptive Pills*, 69 CONTRACEPTION 227, 233 (2004).

[129] *Id*.

[130] Campbell, *supra* note 126, at S23-S27, T2.

[131] *Id*.

These women who are more willing to use emergency contraception when they know its mechanisms will be able to take precautions against unwanted pregnancies without facing potentially challenging moral choices. Pro-life women who consider using emergency contraception need not face qualms akin to those they would face when deciding whether or not to have an abortion.

A proper understanding of how emergency contraception functions will also reduce social stigma and complicity concerns. *Hobby Lobby* is instructive in how complicity concerns can draw an outsider, like an employer, into a woman's decision regarding contraception, but contraception use can become a community affair in other ways. In New York City, for example, one in five men will be turned away by a pharmacist who refuses to sell him Plan B.[132] Women also report trouble accessing contraception due to moral reprimands from doctors and pharmacists.[133] Between 2002 and 2010, concern from some members of Congress led to extended delay in stocking military hospitals with emergency contraception, which doctors consider to be an essential element in hospital supplies, particularly for victims of sexual assault.[134] Similarly, for nearly a decade, the Department of Justice did not include emergency contraception in The National Protocol for Sexual Assault Medical Forensic Examinations.[135]

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[132] D.L. Bell, E.J. Camacho, A.B. Velasquez, *Male Access to Emergency Contraception in Pharmacies: A Mystery Shopper Survey*, 90 CONTRACEPTION 413-15 (2014).
[133] Jenny Kutner, *Here's What It's Like to be Slut-Shamed for Trying to Buy Birth* Control, MIC, Dec. 30, 2017, https://mic.com/articles/129571/here-s-what-it-s-like-to-be-slut-shamed-for-trying-to-buy-birth-control#.V9gyX3ate
[134] *Update on Emergency Contraception*, ASS'N REPROD. HEALTH PROF. (March 2011), http://www.arhp.org/Publications-and-Resources/Clinical-Proceedings/EC/Barriers.
[135] A NATIONAL PROTOCOL FOR SEXUAL ASSAULT MEDICAL FORENSIC EXAMINATIONS, PRESIDENT'S DNA INITIATIVE, U.S. DEP'T. JUSTICE (Sept. 2004), http://www.nhcadsv.org/uploads/natlprotocol.pdf. The Protocol was updated in 2013 and includes information on emergency contraception. A NATIONAL PROTOCOL FOR SEXUAL ASSAULT MEDICAL FORENSIC EXAMINATIONS, SECOND EDITION, OFF. VIOLENCE AGAINST WOMEN, U.S. DEP'T. JUSTICE (Sept. 2004), https://www.ncjrs.gov/pdffiles1/ovw/241903.pdf.

The stigma that leads to these decisions makes little sense. Most women, including religious women, use contraception which has the same functionality as emergency contraception. More than 99% of women aged 15-44 who have had sex have used at least one contraceptive method and 62% of all women of reproductive age are currently using a contraceptive method.[136] Eighty-nine percent of Catholics at-risk of pregnancy and 90% of at-risk Protestants currently use a contraceptive method. Among sexually experienced religious women, 99% of Catholics and Protestants have ever used some form of contraception.[137] If informed that Plan B and Ella function just like the forms of contraception that they already use, religious objectors would be hard-pressed to continue to resist third-party use of emergency contraception.

In England, following a court decision that emergency contraception does not function to inhibit implantation, the country witnessed changes in both the perception and use of emergency contraception. The same year of the decision, a study of public views on emergency contraception found that non-usage was frequently related to moral or religious reasons as well as attitudes of doctors and pharmacists that deterred women from seeking emergency contraception.[138] Twelve years later, some women still felt judged when using emergency contraception, but more women were using it to prevent unwanted pregnancy.[139] In comparison to the United States where 36% of women think emergency contraception can stop implantation of a fertilized egg,[140] 24% of British

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[136] Defining contraception as a non-family planning method. GUTTMACHER INST., *Contraceptive Use in the United States* (Sept. 2016), https://www.guttmacher.org/fact-sheet/contraceptive-use-united-states.
[137] *Id*.
[138] Caroline Free & Raymond M. Lee, *Young Women's Accounts of Factors Influencing Their Use and Non-Use of Emergency Contraception: In-Depth Interview Study*, 2002 BMJ 325 (2002).
[139] Use has gone from 8.4%, Cicely Marston, Howard Meltzer, Azeem Majeed, *Impact on Contraceptive Practice of Making Emergency Hormonal Contraception Available over the Counter in Great Britain: Repeated Cross Sectional Surveys*, 2005 BMJ, 331, (2005), to 9.6%, Rossella E. Nappi, Paloma Lobo Abascal, Diana Mansour, Thomas Rabe, Raha Shojai, *Use of and Attitudes Towards Emergency Contraception: A Survey of Women in Five European Countries*, 19 EUR. J. CONTRACEPTION & REPROD. HEALTH CARE, 93-101(2014).
[140] J.W. Campbell et al., *Attitudes and Beliefs About Emergency Contraception Among Patients at Academic Family Medicine Clinics*, 6 ANNALS FAM. MED. S23-S27 (2008).

women think the same.[141] Of course, caution must be taken attributing causation to events spread over time or across different countries, but the willingness of a British court to take account of medical evidence and the subsequent increase in use and knowledge is notable.

Improving social knowledge about how emergency contraception works can make it easier for women to access contraception and face less stigma as they do so.

B. The Culture Wars & the Merging of Contraception and Abortion

Emergency contraception has proven to be a powerful point of conflict in American politics. In this Section I use Professor Lessig's work on "tying" to argue that our collective misunderstanding of how emergency contraception functions and the furtherance of that misunderstanding by the government has unnecessarily fueled conflict over contraception by imbuing contraception with the moral divisiveness of abortion.

Rhetoric surrounding emergency contraception pits women seeking basic health services against Catholic nuns forced to pay for abortions, reproductive rights against religious rights,[142] and the Left against the Right.[143] Based on the FDA's labeling, activist groups, regulators, and the courts entrench this conflict by reiterating that emergency contraception really does cause abortion, thereby requiring that we make a choice between women and religion.

Regular hormonal contraception does not invoke the same tension. Some religious people of course do not use contraception, and occasionally they refuse to supply it to others, but we have

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[141] Rossella E. Nappi, Paloma Lobo Abascal, Diana Mansour, Thomas Rabe, Raha Shojai, *Use of and Attitudes Towards Emergency Contraception: A Survey of Women in Five European Countries*, 19 EUR. J. CONTRACEPTION & REPROD. HEALTH CARE, 93-101(2014).

[142] *See generally* Douglas NeJaime & Reva Siegel, *Conscience Wars: Complicity-Based Conscience Claims in Religion and Politics*, YALE L.J. 2542 (2015).

[143] http://www.lifenews.com/2016/03/23/ruth-bader-ginsburg-wants-to-force-catholic-nuns-to-pay-for-abortion-drugs-it-cant-be-all-my-way/

not yet seen the same rallying against contraception as we have against emergency contraception.[144] The link to abortion has been critical for pro-life groups garnering opposition to emergency contraception.[145]

Professor Lessig calls this approach "tying."[146] Those seeking to change the social perception of an act can transform it by "associating it with another social meaning that conforms to the meaning that the architect wishes the managed act to have."[147] Those with more extreme views on contraception thereby harness opposition to abortion to spread hostility from abortion to contraception.[148]

It is thus evident why the Trump Administration's contraception rules cite opposition to "abortifacients" to allow the exclusion of all forms of contraception from insurance plans. By speaking in one breath and failing to differentiate between emergency contraception and contraception, the two are tried and abortion-related enmity is spread to other forms of women's reproductive care.[149]

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[144] This is likely due to the rates at which religious women use contraception. *See* notes 136 and 137 and surrounding text.

[145] For a critique of pro-life group's anti-contraception messaging, see Priscilla J. Smith, *Contraceptive Comstockery: Reasoning from Immorality to Illness in the Twenty-First Century*, 47 CONN. L. REV 974, 1012-17.

[146] Lawrence Lessig, *The Regulation of Social Meaning*, 62 U. CHI. L. REV. 943, 1009 (1995).

[147] *Id*.

[148] "[T]he anti-choice movement deliberately sows confusion [about contraception and abortion], and just because their lies have been debunked in the paper of record is hardly reason to think they'll grow more shy with the lying. After all, the claim that abortion causes breast cancer is still flung around shamelessly, no matter how many times a year scientists disprove it. There's no reason to think they'll suddenly grow respectful of actual science now that it has shown that emergency contraception has no effect on egg cells who've had their good Christian souls injected into them by those emissaries of the Lord known as sperm. As the past two years have demonstrated, flinging the word *abortion* around in order to attack contraception access is a remarkably effective anti-choice tool. They're not going to let a little science get in the way of a deal like that." Amanda Marcotte, *Emergency Contraception Is Not Abortion*, SLATE (June 6, 2012), http://www.slate.com/blogs/xx_factor/2012/06/06/the_new_york_times_confirms_that_emergency_contraception_only_works_by_suppressing_ovulation_.html

[149] The tendency of opponents of contraception to liken emergency contraception to oral contraceptives in order to make oral contraceptives seem to be abortifacient has been noted before, in the context of university health policy. *See* Briana C. Hill, *Widening the Battlefield: Using Emergency Contraception to Get from Abortion to Birth Control*, 16 UCLA Women's L.J. 281, 304 (2007).

Tying has also made it harder to question the science behind the abortifacient understanding of the mechanisms of emergency contraception. By connecting emergency contraception to abortion, "abortifacients" have been made taboo. The more contested a topic is, the less likely science will be able to persuade differently. Just as a person who believes in a strong Second Amendment is likely to think that gun ownership makes society safer, a person who suspects Plan B to cause abortions is going to accept scientific studies on Plan B's mechanisms selectively.[150] Cultural and political commitments affect our interpretations of evidence, no matter how significant the results or authoritative the source.[151] Tying very effectively confers both hostility and assurance, promoting further entrenchment.

The simple mistake of failing to stay up-to-date on contraceptive science, augmented by a combative political culture eager to capitalize on the most convenient version of the truth has made it so we fight bitterly over cultural values without any grounding in reality.

C. Propagating Alternative Facts

The propagation of the claim that Plan B is an abortifacient fits within a larger new trend that disclaims facts and evidence in exchange for convenient political messages. In recent times, truth and falsity have become nearer neighbors and misstatements of fact pervade news stories.[152] Allison Orr Larsen demonstrates that constitutional law is in an "age of alternative facts," where evidence is martialed selectively and activist groups, legislatures, and courts are each subsumed

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[150] Jeffrey J. Rachlinski, *Evidence-Based Law*, 96 CORNELL L. REV. 901 (2010), citing Dan M. Kahan, *The Cognitively Illiberal State*, 60 STAN. L. REV. 115,122-142 (2010).
[151] Dan M. Kahan, *The Cognitively Illiberal State*, 60 STAN. L. REV. 115, 153 (2010).
[152] *See, e.g.*, Robert Shlesinger, *Fake News in Reality*, U.S. NEWS & WORLD REP. (Apr. 14, 2017), https://www.usnews.com/opinion/thomas-jefferson-street/articles/2017-04-14/what-is-fake-news-maybe-not-what-you-think; Craig Silverman, *This Analysis Shows How Viral Fake Election News Stories Outperformed Real News on Facebook*, BUZZFEED (Nov. 16, 2016), https://www.buzzfeed.com/craigsilverman/viral-fake-election-news-outperformed-real-news-on-facebook?utm_term=.trQj8lARZ#.awL9WwydB.

by false claims.[153] "[C]onstitutional litigants have become quite sophisticated" at finding friendly facts and "constitutional law has become increasingly dependent on factual claims," leading to Supreme Court decisions based on false claims such as the widespread nature of voter fraud. [154] Larsen explains that social media and political polarization have also contributed to this "post-truth" society in which what we think is true is more important than what can actually be shown.

Larsen explores the pervasiveness of wrongheaded claims about abortion, debunking fetal pain and informed consent laws. She gives the example of six states that require women seeking abortions to be told that abortion may increase their risk of breast cancer—a claim that has no support.[155] Larsen's critiques are also applicable to emergency contraception, which fits neatly into this broader story of politicized facts.

Priscilla Smith understands pro-life opposition to emergency contraception as ignorant of facts out of a concern "reaching far beyond the 'abortion question,' and the ethics of protection of 'human life.'"[156] She writes that "the campaign [against emergency contraception] reflects conflicts concerning the propriety of non-procreative sex and particularly the ability of women to

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[153] Allison Orr Larsen, *Constitutional Law in an Age of Alternative Facts*, 93 N.Y.U. L. REV. 175 (2018), *available at* https://ssrn.com/abstract=3033038.
[154] *Id.* at 180-81.
[155] The six states are Kansas, Mississippi, North Dakota, Texas, Oklahoma, and Alaska. Kansas, Mississippi, North Dakota, and Texas have all codified the requirement by statute. KAN. STAT. ANN. §§ 65-6709(a)(3), 6710(a)(2) (Supp. 2016); MISS. CODE ANN. § 41-41- 33(1)(a)(ii) (2017); N.D. CENT. CODE § 14-02.1-02.1(1)(d) (Supp. 2017); TEX. HEALTH & SAFETY CODE ANN. §171.012(a)(1)(B)(iii) (West 2017). Alaska and Oklahoma include the connection with breast cancer in the printed materials provided to women seeking abortion. *See* OKLA. STATE BD. OF MED. LICENSURE & SUPERVISION, A WOMAN'S RIGHT TO KNOW 17 (4th ed. 2015), http://www.awomansright.org/pdf/AWRTK_Booklet-English-sm.pdf (noting that studies regarding a link between breast cancer and abortion have reached differing conclusions); *Possible Medical Risks or Complications of Abortion*, ALASKA DEP'T OF HEALTH & SOC. SERVS., http://dhss.alaska.gov/dph/wcfh/Pages/informedconsent/abortion/risks.aspx (last visited Dec. 27, 2017) (detailing risks including blood clots, cervical injury, and bacterial infections); *see also The Abortion-Breast Cancer Link*, LIFESITENEWS, https://www.lifesitenews.com/resources/abortion/the-abortion-breast-cancer-linkAbortion (stating that for the connection between induced abortions and breast cancer, "the proof is in the pudding"). For a report by the National Cancer Institute, see *Summary Report: Early Reproductive Events and Breast Cancer Workshop*, NAT'L CANCER INST., (finding "[i]nduced abortion is not associated with an increase in breast cancer risk").
[156] Priscilla J. Smith, *Contraceptive Comstockery: Reasoning from Immorality to Illness in the Twenty-First Century*, 47 CONN. L. REV 974, 1012-17, 1017.

express their sexual desire without consequences, without fear of pregnancy."[157] Smith draws on Reva Siegel's work demonstrating that concerns regarding gender roles, motherhood, and women's sexuality lurk behind opposition to abortion, even when pro-life people purport to protect the fetus's interest in life. Contraception presents similar affronts to socially conservative ideals, but rather than making forthright appeals to those ideals, activists and politicians manipulate the public's understanding of the facts behind contraception.

With allegations of "fake news" widespread,[158] we ought also to be concerned that efforts to educate will be eschewed as lies. Individuals may be hesitant to trust unfamiliar sources of information, particularly if the source falls on the other side of the partisan divide. Pro-choice advocates may struggle to be heard if they increase their efforts to set the record straight on emergency contraception. In the current political climate, trust is in short supply and that likely makes bridging information gaps more difficult.

D. The Effect on Law

Law has so far embraced our collective disregard for how emergency contraception functions, and not without cost. In this Section I explore the impact on two substantive areas of law, reproductive rights and religious rights, and consider how courts have been cornered into abandoning their long-held deference to moral beliefs.

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[157] *Id.*

[158] *See, e.g.*, Donald J. Trump (@realDonaldTrump), TWITTER (May 28, 2017, 8:33 AM), https://twitter.com/realDonaldTrump/status/868807327130025984.

1. Reproductive Rights & Evading Science

When *Hobby Lobby* was at the Tenth Circuit, the court declined to "wade into scientific waters" on the question of how emergency contraception works.[159] In *Stormans*, the parties agreed not to brief the issue when it was not relevant to the Free Exercise inquiry, but the Ninth Circuit failed to revive the issue when it became clear the case would be decided on grounds that necessitated a full factual record.[160] Litigants suing the Trump Administration have similar neglected to raise the issue of the inadequate factual basis for the new contraception regulations.[161] As a result, these cases are litigated without necessary factual grounds.

This is particularly problematic in reproductive rights cases. Under *Whole Woman's Health*, courts have a duty when reproductive rights are at issue to independently consider evidence to resolve questions of medical uncertainty.[162] The *Whole Woman's Health* majority emphatically dismissed Texas's statement that "legislatures, and not courts, must resolve questions of medical uncertainty"[163] as inconsistent with *Planned Parenthood v. Casey* and *Carhart v. Gonzales*. Noting *Casey*, the Court reiterated that it "relied heavily on the District Court's factual findings and the research-based submissions of amici in declaring a portion of the law at issue unconstitutional."[164] The *Whole Woman's Health* majority then reviewed *Gonzales*, glossing over *Gonzales*'s statement that legislative fact-finding ought to be reviewed "under a deferential standard," and instead highlighting that *Gonzales* "went on to point out that the '*Court retains an independent*

[159] Hobby Lobby 723 F.3d 1114, 1123 (10th Cir. 2013).
[160] *See supra* Section II.C.2.
[161] *See supra* Section II. A.
[162] Whole Woman's Health v. Hellerstedt, 136 S. Ct. 2292, 2310 (2016). *See also* Linda Greenhouse & Reva B. Siegel, *Casey and the Clinic Closings: When Protecting Health Obstructs Choice*, 125 YALE L.J. 1428 (2015).
[163] 136 S. Ct. 2292 at 2310 (2016).
[164] 136 S. Ct. 2292, at 2310, citing Planned Parenthood of Southeastern Pa. v. Casey 505 U.S. 833, at 888–894 (1992) (emphasis removed).

constitutional duty to review factual findings where constitutional rights are at stake.'"[165] Although the Supreme Court upheld the abortion regulation in *Gonzales*, the *Whole Woman's Health* Court emphasized that *Gonzales* did not solely rely on legislative findings because "[u]ncritical deference to Congress' factual findings . . . is inappropriate."[166] The *Whole Woman's Health* decision therefore relied on expert testimony and peer-reviewed studies to demonstrate that a factual inquiry rendered the law at issue unconstitutional.

The *Whole Woman's Health* analytic clearly applies to emergency contraception cases brought by individual litigants. The *Whole Woman's Health* Court was clear that it would not defer to the decision of a democratically-elected state legislature—the decision of an individual plaintiff would surely not be subject to deference.[167]

The case also applies to contraception. The right to contraception is more firmly established as a constitutional matter than the right to abortion. *Griswold*[168] and *Eisenstadt*,[169] the Court's original contraception cases, while not unchallenged, have remained on stronger constitutional footing than *Roe*.[170] Furthermore, the government interest in providing women access to contraception has long been considered a compelling interest.[171] The *Casey* court found that "[t]he ability of women to participate equally in the economic and social life of the Nation has been facilitated by their ability to control their reproductive lives,"[172] and contraception has been

[165] 136 S. Ct. 2292, at 2310 (quoting Casey 550 U.S., at 165).
[166] 136 S. Ct. 2292, at 2310 (quoting Gonzales v. Carhart 550 U.S. 124, at 165 (2007)).
[167] *See generally*, Linda Greenhouse & Reva Siegel, *The Difference a Whole Woman Makes: Protection for the Abortion Right After Whole Woman's Health*, 126 YALE L.J. FORUM (Oct. 11, 2016).
[168] Griswold v. Connecticut, 381 U.S. 479, 485-86 (1965).
[169] Eisenstadt v. Baird, 405 U.S. 438 (1972).
[170] Roe v. Wade, 410 U.S. 113, 159 (1973). *Cf.* Carey v. Population Services International, 431 U.S. 678 (1997) *with* Planned Parenthood of Southeastern Pa, v. Casey 505 U.S. 833 (1992); Gonzales v. Carhart 550 U.S. 124 (2007). *See also* "Under our cases, women (and men) have a constitutional right to obtain contraceptives" Burwell v. Hobby Lobby Stores, Inc., 134 S. Ct. 2751, 2779–80, (2014).
[171] *See* Griswold v. Connecticut, 381 U.S. 479, 485-86 (1965); Eisenstadt v. Baird, 405 U.S. 438 (1972); Burwell v. Hobby Lobby Stores, Inc., 134 S. Ct. 2751, 2779–80, (2014).
[172] Planned Parenthood of Southeastern Pa. v. Casey, 505 U.S. 833, 856 (1992).

understood to be crucial to that control.[173] Consequently, *Whole Woman's Health*'s insistence on evidence-based decision-making to protect fundamental rights ought to apply with greater weight in a contraception case.

Some question remains over what level of scientific consensus courts will require. In *Whole Woman's Health*, the district court found that the "great weight of evidence" showed that clinic closures would have harmful effects provoked a higher standard of review.[174] As discussed above, the consensus about the mechanism of Plan B and, to a lesser extent, Ella is well-established and well-tested. Unless all far-fetched claims are to be taken as truth, judicial fact-finding must occur. Our legal system would cease to function were courts incapable of conducting trials and making legal determinations as to what is most probable. These determinations are necessary, as the scientific method cannot make definitive resolutions. Courts constantly engage with scientific uncertainty in other areas of law.[175] In the case of emergency contraception, this may be particularly challenging because some who object to providing emergency contraception to others also object to the testing of their claim, making it impossible to be disproven. The resounding message of *Whole Woman's Health* is clear: when reproductive rights are at stake, plaintiffs' claims are not to be insulated from judicial review.

An evidence-based approach to contraception was at the center of the decision of a British court in the case of *Smeaton v. Secretary of State for Health*.[176] In 2002, England's Administrative Court determined that supplying Levonelle (Plan B) was not a criminal offense under an 1861 act

[173] Burwell v. Hobby Lobby Stores, Inc., 134 S. Ct. 2751, 2779–80, (2014).
[174] 136 S. Ct. 2292 at 2311 (2016).
[175] *Cf.* Kenneth S. Abraham & Richard A. Merrill, *Scientific Uncertainty in the Courts*, 2.2 ISSUES SCI. & TECH. 93-107 (1986).
[176] R (on the Application of Smeaton) v. Secretary of State for Health. [2002] EWHC (Admin) 610, 2 Family Law Reports 146 (Eng.).

prohibiting the provision of "any poison or other noxious thing . . . with intent to procure the miscarriage of any woman."[177] The British court emphasized that "so far as the court is concerned, this case has nothing to do with either morality or religious belief," but rather whether the pill is an abortifacient in violation of the criminal law. Stating that the court "can and must hear expert medical evidence," the decision reviewed evidence brought by dozens of experts and found in numerous medical dictionaries to hold that the "current medical . . . understanding of what is meant by 'miscarriage' plainly excludes results brought about by IUDs, the pill, the mini-pill and the morning-after pill."[178] In doing so, the decision carefully addressed the mechanisms of emergency contraception and concluded that it is not an abortifacient.[179] Curiously, although U.S. law is absent from the decision's review of international law, the last sentence of the *Smeaton* decision asks, "[t]he reasoning of the Supreme Court of the United States of America in *Griswold, Eisenstadt* and *Carey* no doubt reflect a different constitutional background, but are not the underlying principles the same?"[180] Indeed, one might think that they are.

2. Factual Deference under Free Exercise

Undue deference to litigants' beliefs has also begun to lead to problems in religious freedom cases. If other RFRA cases follow the precedent of *Hobby Lobby*, the invocation of

[177] Offenses Against the Persons Act, 1861, c. 100, s.58-59. (Eng).
[178] *Id.* at 95.
[179] *Smeaton* relies primarily on understandings of the start of pregnancy and does not make a determination on the mechanisms of Levonelle. At the time of *Smeaton*, the evidence relied on by doctors today was not available, so the *Smeaton* judge would have been unable to state unequivocally that Levonelle does not impede implantation of a fertilized egg.
[180] *Id*. at 103.

religious freedom will permit plaintiffs to win cases based on unsupported and untested factual claims.

In the Free Exercise context, freedom of belief is "absolute"[181] and religious beliefs are not tested for their scientific veracity. But in other constitutional contexts, such as Due Process, religious beliefs are not treated as different from any other belief. Beliefs are not inherently sacrosanct, and courts are obliged to serve their fact-finding mission. It is for this reason that *Stormans* was incorrectly decided—the courts deferred to religious plaintiffs' beliefs outside the Free Exercise context.

The Supreme Court decided *Hobby Lobby* using a different but related deference. Under Free Exercise and RFRA jurisprudence, it is proper for courts to defer to plaintiffs about their religious beliefs. Courts will not question where an individual "dr[aws] the line" in defining which practices run afoul of her religious beliefs, and instead take the plaintiff at his or her word.[182] In *Bowen v. Roy*, for example, the Supreme Court was confronted with what to do when a child's parents refused to supply the girl's Social Security number to the government so she could get certain benefits, acting on the belief that the number would harm the girl's spirit.[183] The Justices refused to question the parents' belief in the supernatural power of a Social Security number.

In *Hobby Lobby*, however, the Court did not defer to a plaintiff's religious, spiritual, or metaphysical belief. The Hobby Lobby store owners sought to protect their beliefs about how emergency contraception works—a purely factual inquiry. The Court has never before treated factual beliefs as on equal footing with religious beliefs.

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[181] "[T]he freedom of individual belief… is absolute." Bowen v. Roy, 476 U.S. 693, 699 (1986). *Bowen* does, however, draw a distinction between belief and conduct, and the *Bowen* plaintiffs lost their suit.
[182] Thomas v. Review Board of the Indiana Employment Security Division, 450 U.S. 707, at 715 (1981).
[183] 476 U.S. 693 (1986).

Nor should they. It is appropriate for courts to defer over religious beliefs insofar as plaintiffs think abortion is morally wrong. It is inappropriate for courts to go further and let plaintiffs decide what is and what is not abortion. That belief is simply a statement about the physical world and, critically, a falsifiable belief. Professor Amy Sepinwell notes that courts have "a role in policing empirical truth" because "there is no state license for 'epistemic abstinence' when it comes to taking cognizance of empirical facts about the world.[184]

If the courts do not differentiate between religious and factual beliefs, plaintiffs making RFRA claims will be unbounded in what they can assert, while plaintiffs making the same claims under other statutory or constitutional provisions will be on vastly different legal footing.

Not all cases have the weight of evidence strongly supporting one scientific proposition. In cases in which the science is less certain, judgments will need to be made about when a trial is likely to come to a clear conclusion. When scientists come to conflicting conclusions, challenging a religious plaintiff makes less sense. When in the context of a law supported by scientific consensus, a religious belief in opposition to that scientific consensus ought not to be given the same deference as a religious belief about a spiritual matter.

3. Abandoning *Roe* Deference

The elision of fact and faith has led to undue deference to plaintiffs' factual opinions, but also to slippage away from long-held deference to moral questions.

The Supreme Court's review of *Hobby Lobby* is again demonstrative. The majority wrote that the store owners were conducting "business in accordance with [their] religious beliefs"[185]

[184] Amy J. Sepinwall, *Conscience and Complicity: Assessing Pleas for Religious Exemptions in* Hobby Lobby*'s Wake*, 82 U. CHIC. L. REV. 1932 (2015).
[185] Hobby Lobby at 336.

when they refused to pay into insurance plans that covered their employees' emergency contraception. The Court gave no definition of religious belief, leaving the reader to think that providing Plan B *must* impinge the plaintiffs' religious beliefs. The dissent made the same error. In defending against the majority's claim that the dissent "tell[s] the plaintiffs that their beliefs are flawed," Justice Ginsburg wrote, "[r]ight or wrong in this domain is a judgment no Member of this Court, or any civil court, is authorized or equipped to make."[186]

Justice Ginsburg refers to the deference the Court has traditionally given to moral opposition to abortion. In *Roe v. Wade*, the Supreme Court was agnostic to the question of when life begins because, "[w]hen those trained in the respective disciplines of medicine, philosophy, and theology are unable to arrive at any consensus, the judiciary, at this point in the development of man's knowledge, is not in a position to speculate as to the answer."[187] The Court actively chose not to resolve a deeply contested issue so as not to pick sides in moral debates, à la the Scopes trial. Justice Ginsburg spoke to this idea in her *Hobby Lobby* dissent.

Yet, the *Hobby Lobby* plaintiffs' beliefs were flawed, and the dissent should have noted that. The elision of fact and faith in emergency contraception claims makes it very difficult to tease apart questions of fact (how emergency contraception functions) from faith (whether abortion is wrong). Courts ought to apply deference to religious claims while reserving appropriate skepticism toward factual matters. When this distinction is not made, not only is reality pushed aside, but the law morphs to adjust to a landscape where fact and faith are one and the same.

In *Stormans*, rather than remanding to the district court for fact-finding, the Ninth Circuit resolved the case by breaking new ground in due process law and invading the space *Roe* carved

[186] Hobby Lobby dissent at 22, n. 21.
[187] Roe v. Wade, 410 U.S. 113, 159 (1973).

out for moral beliefs. The *Stormans* plaintiffs asserted that the Washington Commission's rules infringe a fundamental right, the "right to refrain from taking human life."[188] Judge Graber rejected this claim, writing that "[p]laintiffs have not attempted to establish that Plan B and Ella *objectively* cause the taking of human life."[189] Judge Graber accepted that emergency contraception can inhibit implantation, but said that because it is disputed whether life begins at implantation or some other point during conception, the plaintiffs' belief that a life had ended was entirely subjective. This broke new constitutional ground, forging apart due process into subjective and objective halves. By deciding the case based on the question of when life begins, rather than on how emergency contraception functions, the court was backed into resolving the case by determining new constitutional due process rights and cordoning off plaintiffs' religious beliefs.

Roe deference is an essential part of constitutional jurisprudence because it preserves moral questions for legislatures and for the people. Maintaining the line between fact and faith is essential for reproductive rights, religious rights, and moral freedom.

CONCLUSION

The FDA's failure to update Plan B's labeling has had deep practical consequences for regulation, for law, and for those who use and supply emergency contraception. More systemic changes are also afoot, as rhetorical moves have increased antagonism toward contraception generally. The country's shift into an era of alternative facts casts doubt on our ability to use education to solve this problem.

[188] Stormans, Inc. v. Wiesman, 794 F.3d 1064, 1086 (9th Cir 2015).
[189] Stormans, Inc. v. Wiesman, 794 F.3d 1064, 1086-87 (9th Cir. 2015).

Nevertheless, the disagreement over emergency contraception brings opportunity. The Left and Right have the rare opportunity to come together without conceding any ground on values. In debates over physician-assisted suicide and capital punishment, there is no piece of scientific knowledge that will allow us to avoid questions of life and death. The legal status of abortion will similarly not be determined in laboratory. Emergency contraception is different though because it does not present a similarly unsolvable moral dilemma. The knowledge that chemical compounds do not have a certain effect on internal organs opens a doorway to escape moral reckoning. We ought to set aside politics and walk through it.