

The Supreme Court & Science: A Case in Point

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*Abstract: When it comes to science and technology, Supreme Court justices resemble lay people in robes, often ill-equipped to grasp fully the implications of the important cases they are asked to decide on scientific subjects. The justices approach science not in the abstract, of course, but from within the doctrinal area in which the particular dispute arises, whether intellectual property, criminal law, or the First Amendment's protection of free speech. The Supreme Court's abortion jurisprudence offers a particularly interesting and consequential example of the Court's encounter with science: a prolonged encounter, since from the beginning, the Court viewed women's claim to reproductive freedom through a medicalized lens. In recent years, states wishing to curb access to abortion have claimed health justifications for placing novel and onerous restrictions on abortion providers. In *Whole Woman's Health v. Hellerstedt*, decided in June 2016, the Court invalidated one such effort, a Texas law, on the ground that the claimed health benefits were insufficient to justify the predictably massive shrinkage of the medical infrastructure necessary for women to be able to exercise their constitutional right to terminate a pregnancy. Evidence-based law met evidence-based medicine in a decision that demonstrated a new willingness by the Court to insist on good science in the area of abortion, and perhaps beyond.*

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Science and the Supreme Court of the United States are uneasy partners. Justice Antonin Scalia made that quite clear in a one-paragraph opinion concurring in the Court's unanimous 2013 decision on the patentability of sequences in the human genome: in this case, genetic mutations that increase the risk of breast and ovarian cancer. "I join the judgment of the Court, and all of its opinion" except for those sections describing "fine details of molecular biology," Justice Scalia wrote in *Association for Molecular Pathology v. Myriad Genetics*. He explained: "I am unable to affirm those details on my own knowledge or even my own belief."¹

This was surely an odd expression of insecurity from the ordinarily self-confident justice. What sort of "belief" in molecular biology was he lacking? (Or,

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by the same token, on what beliefs regarding other subjects on the Supreme Court's docket was he content to rely without question?)

Justice Scalia was no longer alive when, during its 2016 term, the Court considered the question of how courts should measure intellectual disability, for purposes of deciding whether a capital defendant should be deemed so disabled as to be constitutionally ineligible to be put to death. The Texas Court of Criminal Appeals had rejected the definitional approach to intellectual disability currently used in the medical community. Upholding the death sentence for a man with IQ scores in the 70s and adaptive-functioning test scores more than two standard deviations below the mean, the state court instead employed a guideline from a 1992 opinion of its own. As Justice Ruth Bader Ginsburg described the inadequacy of that measure in her majority opinion, it relied on "lay perceptions of intellectual disability" long superseded by "improved understanding over time."² The Supreme Court overturned the death sentence. Justice Ginsburg's opinion canvassed the current medical approach, relying in part on a brief filed by the American Psychological Association that described contemporary understanding and practice.

Notably, the decision in *Moore v. Texas* was not unanimous. In his dissenting opinion, which Justices Clarence Thomas and Samuel Alito joined, Chief Justice John Roberts objected that the definition of "cruel and unusual" punishment – a punishment that thus violates the Eighth Amendment – must rest "on a judicial judgment about societal standards of decency, not a medical assessment of clinical practice." The chief justice continued: "The Eighth Amendment, under our precedent, is supposed to impose a moral backstop on punishment, prohibiting sentences that our society deems repugnant. The Court, however, interprets that consti-

tutional guarantee as turning on clinical guidelines that do not purport to reflect standards of decency."³

This was a fascinating objection: not that the current medical standards were incorrect or incapable of consistent application, but that outside a particular constitutional context, they were simply irrelevant. The dispute in this Texas death penalty case thus has profound implications across the Supreme Court's docket, whenever the justices are faced with deciding what weight to give a claim based on science compared with the weight of a claim grounded in precedent or in the deference owed to Congress or a state legislature.

In other words, a Supreme Court case is not a laboratory experiment, and science does not reside on the Court's docket in a vacuum.⁴ It always exists in context. And the most freighted context of all is abortion.

"In the abortion area," one scholar of abortion law observed not long ago, "law drives science more than science drives law."⁵ While that statement may appear paradoxical, it simply reflects the framework judges use to rule on constitutional questions. The relevance of science – or history, or economics, or any field of knowledge extrinsic to the actual legal materials at hand – turns on how closely judges are prepared to scrutinize the legislation they are reviewing. The degree of judicial scrutiny determines how much deference courts give to legislative actions. Thus, a law that touches on purely economic interests, which under the Supreme Court's precedents receive the lowest level of judicial scrutiny, will ordinarily be upheld as long as judges are satisfied that there was some reason, almost any reason, for its enactment.⁶ Under "rational basis review," judicial deference to legislative choice is nearly total. At the other end of the spectrum, the government needs a "compelling" justification for infringing a right deemed "fundamental," paradigmatic

ically the right to be free of official discrimination on the basis of race.⁷ Such laws or government policies are accorded strict judicial scrutiny, with courts' deference at a minimum.

With that brief digression into constitutional law as background, I turn now to a slightly more extended survey of the Supreme Court's abortion jurisprudence. What emerges – and what is too often overlooked in discussions about the Court and abortion – is the extent to which law and medicine intersect and entwine, from the beginning of the story through the Court's most recent decision.⁸

To begin at the beginning: The Court's 1973 decision in *Roe v. Wade* recognized as “fundamental” a woman's right to terminate a pregnancy before fetal viability. After viability, according to *Roe*, the state acquires a “compelling” interest in unborn life and can prohibit abortion except when necessary to preserve a woman's life or health.⁹ The Court explained that

for the period of pregnancy prior to this “compelling” point, the attending physician, in consultation with his patient, is free to determine, without regulation by the State, that, in his medical judgment, the patient's pregnancy should be terminated. If that decision is reached, the judgment may be effectuated by an abortion free of interference by the State.¹⁰

Note that the Court, far from hoisting a banner for women's rights, placed the decision of whether to terminate a pregnancy in the hands of the (presumably male) doctor “in consultation with his patient,” rather than, as one might suppose, the other way around. *Roe v. Wade* was a highly medicalized decision, relying both on a medical definition of the course of a pregnancy and on doctors to make the appropriate decision.¹¹ While a feminist expression of the abortion right might declare that it is not up to the state to determine a

woman's life course, the Court's primary concern lay elsewhere. The men who voted with the seven-to-two majority to recognize a right to abortion were concerned with protecting their peers in the medical profession against criminal prosecution for applying their best judgment of how to deal with a patient's undesired or compromised pregnancy. It was not the role of the state, the Court declared, to second-guess the exercise of professional judgment.¹²

For some years after *Roe*, with the majority supporting the right to abortion still largely intact, the Court adhered to the view that a doctor's judgment was not to be questioned. For example, in the 1979 case *Colautti v. Franklin*, the Court struck down a Pennsylvania law that required doctors to perform later-term abortions by the method most likely to preserve the life of a potentially viable fetus. The six justices in the majority recoiled from the notion that Pennsylvania was telling doctors what to do, on pain of criminal liability, in such a delicate and often ambiguous situation.¹³ “The choice of an appropriate abortion technique,” Justice Harry Blackmun wrote for the Court, involved “a complex medical judgment about which experts can – and do – disagree.” Clearly, this was a matter for doctors, not legislators.

But then Ronald Reagan was elected president, on a platform that called for overturning *Roe v. Wade*, and things began to change. Justice Potter Stewart, a strong member of the *Roe* majority, retired in 1981 and was succeeded by Sandra Day O'Connor. Her views on *Roe v. Wade* remained a mystery for her first two years on the bench. But near the end of her second term, the Court decided a case from Akron, Ohio. The city had enacted an ordinance entitled “Regulation of Abortion” that, among other features, imposed a twenty-four-hour waiting period and required doctors to read an “informed consent” script that the city fathers hoped might persuade women to change

their minds. The Court invalidated the ordinance, with Justice Powell explaining for the majority that fidelity to *Roe v. Wade* left no choice but to declare the ordinance unconstitutional.¹⁴

Justice O'Connor dissented in a strongly worded attack on *Roe* itself, centered on her understanding of neonatology. Premature infants were being saved at ever earlier gestational ages, she wrote, observing that a baby born at twenty-two weeks "is now thriving in a Los Angeles hospital."¹⁵ She continued:

It is certainly reasonable to believe that fetal viability in the first trimester of pregnancy may be possible in the not too distant future. . . . The *Roe* framework, then, is clearly on a collision course with itself. As the medical risks of various abortion procedures decrease, the point at which the State may regulate for reasons of maternal health is moved further forward to actual childbirth. As medical science becomes better able to provide for the separate existence of the fetus, the point of viability is moved further back toward conception.¹⁶

This was a powerful critique, invoking a medical framework to attack the core of the medicalized *Roe* itself. It was, however, not accurate. While during the decade since *Roe* the survival rate for extremely premature early third-trimester infants like the one Justice O'Connor described had improved from 2 percent to about 10 percent, that did not mean that viability was moving back through the second and first trimesters toward conception. When a case presenting a frontal attack on *Roe* appeared on the Supreme Court's docket six years later, the medical community mobilized to make sure the science of gestation and neonatology would be clear to the justices.

That opportunity came in a case from Missouri, *Webster v. Reproductive Health Services, Inc.*¹⁷ Justice O'Connor's overt hostility

was not the only development that had placed the future of *Roe v. Wade* in grave doubt. So had Justice Powell's recent retirement and his replacement by Anthony M. Kennedy. Further, the administration of President George H. W. Bush raised the stakes by entering the case as a "friend of the Court" to argue vigorously for *Roe*'s overruling. *Amicus curiae* briefs flooded into the Court – seventy-eight of them, a record at the time.¹⁸ For our purposes, the most directly relevant was a brief filed by a coalition of professional medical organizations that included the American Medical Association, the American College of Obstetricians and Gynecologists, and the American Academy of Pediatrics. This brief described the existence of an "anatomic threshold" at twenty-three to twenty-four weeks of gestation; earlier than that, it explained, "the fetal lung does not mature sufficiently to permit normal or even mechanically-assisted respiration."¹⁹ The brief added that medical intervention before that point was fruitless and that "improvements are not expected in the foreseeable future."²⁰

When *Webster* was decided on July 3, 1989, Justice O'Connor refused to join the four justices who would either have overruled *Roe* explicitly, as Justice Scalia advocated, or would have relegated the right to abortion to mere rational-basis review, the position taken by Chief Justice William Rehnquist and Justices Byron White and Kennedy. While voting to uphold the particular regulations at issue, Justice O'Connor said there was no need to revisit *Roe* itself: "When the constitutional invalidity of a State's abortion statute actually turns on the constitutional validity of *Roe*, there will be time enough to reexamine *Roe*, and to do so carefully."²¹ Her separate opinion did not refer to *Roe*'s purported "collision course with itself." Had she read the medical brief and become persuaded that her instinctive conclusion about the future course of viability was scientifically un-

sound? The only evidence we have to go on is the fact that she never mentioned the collision course again.

The Supreme Court's next opportunity to overturn *Roe v. Wade* came only three years later, in *Planned Parenthood of Southeast Pennsylvania v. Casey*.²² Much had changed, and *Roe*'s prospects appeared even more dire: two more members of the original *Roe* majority, Justices Brennan and Marshall, had retired, and President George H. W. Bush had replaced them with Justices David Souter and Thomas. But the Court surprised nearly everyone by reaffirming the right to abortion by a vote of five to four, with Justices O'Connor, Kennedy, and Souter producing an unusual joint opinion that announced a new approach to evaluating abortion regulations: the undue-burden standard.

First proposed by Justice O'Connor in her *Akron* dissent, the undue-burden standard remains the law of the land today. The *Casey* decision defined an undue burden as "a state regulation [that] has the purpose or effect of placing a substantial obstacle in the path of a woman seeking an abortion of a nonviable fetus."²³ While those words were clear enough, their application was anything but certain. It was evident that the fundamental-rights language of *Roe*, with its implication of strict judicial scrutiny of any obstacle to access to abortion, had been superseded. But what did this mean in practice? What type of obstacle was "substantial"? What level of judicial scrutiny was now required?

Rather than answer those questions explicitly, the Court proceeded by example. In *Casey* itself, it upheld most of the challenged regulations contained in Pennsylvania's Abortion Control Act of 1982, including the same waiting-period and mandatory-counseling requirements that had been declared unconstitutional nine years earlier in the *Akron* case.²⁴ At the same

time, the Court struck down as an undue burden a requirement that a married woman inform her husband of her plan to terminate a pregnancy. The major regulations addressed by the Court in *Casey* thus concerned the state's ability to dissuade a woman from terminating her pregnancy. None directly concerned women's health, so one sentence nearly fifty pages into the principal opinion seemed almost beside the point at the time, attracting little notice: "Unnecessary health regulations that have the purpose or effect of presenting a substantial obstacle to a woman seeking an abortion impose an undue burden on the right."²⁵

Fifteen years after *Casey*, in 2007, with Justice O'Connor having been succeeded by Justice Alito, the Court upheld the federal Partial Birth Abortion Ban Act, a law that made it a crime for a doctor to use an abortion method known medically as "intact dilation and extraction" and made notorious by abortion opponents under the label they gave it, "partial-birth abortion."²⁶ The undue-burden question for the Court in this case, *Gonzales v. Carhart*, was whether the procedure was ever medically necessary, given the availability of more common methods of second-trimester abortion. (And if the procedure was regarded as medically necessary, the law would have to provide for an exception from the criminal ban when a woman's health or life was at stake.) Finding a division of medical opinion on the question – as established by extensive district court litigation in the case – the Court deferred to the congressional judgment that no exception to the ban was required; the absence of a health exception therefore did not amount to an undue burden.²⁷ At the same time, Justice Kennedy made it clear in the majority opinion that the Court's deference to Congress was neither automatic nor complete. His language, although little noticed at the time, would prove sig-

nificant: “The Court retains an independent constitutional duty to review factual findings where constitutional rights are at stake.... Uncritical deference to Congress’s factual findings in these cases is inappropriate.”²⁸

While this was the Supreme Court’s last word on the meaning of undue burden for a decade, the abortion landscape outside the Court was hardly quiescent. Abortion opponents, frustrated by the failure of frontal attacks on the right to abortion itself, shifted their focus to the clinic infrastructure necessary to keep abortion relatively accessible and affordable. Spurred by the effective advocacy of Americans United for Life (AUL), a well-established generator of abortion-restricting legislative proposals, Republican-dominated states began to enact laws with the ostensible goal of protecting women from “an increasingly under-regulated and rapacious abortion industry,” in the words of Americans United for Life’s 471-page handbook *Defending Life*.²⁹ Many of the legislatures enacting these laws have followed templates provided by AUL’s “Women’s Protection Project”: “strategic, life-affirming legislation” described as protecting women from “abortion industry abuse.”³⁰ Among these were laws requiring doctors who perform abortions to have admitting privileges at nearby hospitals, and requiring the clinics themselves to meet the physical and operational standards required of ambulatory surgical centers. The abortion-rights community labeled these statutes TRAP laws, for “targeted regulation of abortion providers,” underscoring the fact that abortion was being singled out and that no similar requirements were imposed on providers of medical services considerably riskier than abortion, including liposuction, colonoscopy, and arthroscopic surgery. In earlier work, Reva B. Siegel and I referred to these abortion-targeting laws as manifestations of “abortion exception-

alism.”³¹ Others have referred to such laws as “supply-side policies.”³²

The Texas law known as H.B. 2 – enacted in 2013 – imposed both the admitting privileges and the ambulatory surgical center requirements. At the time, there were forty-two abortion clinics in Texas. The state had long required abortion practices to maintain transfer agreements with outside doctors who would be available to care for any patients needing hospitalization. But it had not required clinic doctors themselves to have admitting privileges, and in eighteen of the forty-two clinics, there were no doctors who had them. And only six clinics, all located in four major cities (Austin, Fort Worth, Houston, and San Antonio), met the surgical-center requirement.

The abortion clinics went immediately to federal court to challenge the constitutionality of the new requirements. How would the courts respond? The sponsors of H.B. 2, following the Americans United for Life playbook, presented the law as necessary to protect the health of Texas women. The legislators were clearly aware that the law would close clinics, and even which specific clinics would be affected. The day after the bill cleared the state Senate (where it was known as S.B. 5), David Dewhurst, the lieutenant governor at the time, tweeted a picture of a map showing the clinics that would close and exulted: “We fought to pass S.B. 5 last night, & this is why!”³³

Challenges to the surgical-center provision and the admitting-privileges requirement were litigated separately. Each reached Federal District Judge Lee Yeakel of the United States District Court in Austin. In October 2013, Judge Yeakel enjoined the admitting privileges requirement, finding that it bore “no rational relationship to improved patient care” or to “the State’s legitimate interest in protecting the unborn.”³⁴ He elaborated: The hospital committees that confer admitting privileges typically require a number of patient ad-

missions each year. But so few abortion patients ever needed hospitalization that doctors whose practice consisted largely of abortions were unable to meet the quota. Judge Yeakel emphasized that from the perspective of patient care, there was no cause for concern; he quoted trial testimony from an emergency room doctor who said that there would be no difference in treatment for an abortion patient regardless of whether her doctor had admitting privileges or lacked them. The state not only “fails to show a valid purpose for the requirement,” Judge Yeakel continued, but “the evidence is that clinics will close” as a result. The admitting privileges requirement, he concluded, thus imposed an undue burden on the right to abortion.³⁵

Clinics did close, nearly half of all the abortion clinics in Texas, after the United States Court of Appeals for the Fifth Circuit overturned Judge Yeakel’s injunction and then refused to issue a stay of its ruling to enable the clinics to appeal to the Supreme Court.³⁶ For our purposes, what was notable about the appeals court’s ruling was its approach to the facts of the case. Did the legislature’s asserted health justification for the admitting privileges requirement hold up to inspection? The Fifth Circuit offered no conclusion because, the court said firmly, the answer to that question did not matter. Abortion regulations were subject only to “*rational* basis review, not *empirical* basis review,” the court said.³⁷ This highly deferential test, the opinion went on, “affirms a vital principle of democratic self-government” and “seeks only to determine whether any conceivable rationale exists for an enactment.”³⁸

This was just the beginning. After Judge Yeakel, in a subsequent opinion, struck down the ambulatory surgical center requirement,³⁹ the Fifth Circuit not only overturned his decision but rebuked him for even “evaluat[ing] whether the ambulatory surgical center provision would ac-

tually improve women’s health and safety.” The court emphasized: “In our circuit, we do not balance the wisdom or effectiveness of a law against the burdens the law imposes.”⁴⁰ This was a swipe at a recent decision by another federal appeals court, the Seventh Circuit, blocking enforcement of an admitting privileges law in Wisconsin. Writing for that court, Judge Richard A. Posner had noted with evident exasperation that despite the asserted health-protecting purpose for requiring admitting privileges, “no documentation of medical need for such a requirement was presented to the Wisconsin legislature.”⁴¹ Judge Posner observed that while the requirement would shut half the state’s abortion clinics, the medical evidence for it was “feeble” at best. He interpreted the undue-burden standard to require a kind of weighted balancing test: “The feebler the medical grounds, the likelier the burden, even if slight, to be ‘undue’ in the sense of disproportionate or gratuitous.”⁴²

The issue was joined. Did medical or scientific evidence matter to the law of abortion, or did it not? The Fifth Circuit’s invocation of a rational basis test, one so deferential that a trial judge was obliged to ignore pertinent evidence, appeared to be flatly incorrect. After all, in adopting the undue-burden standard, the Court in *Casey* rejected the argument that a rational-basis test was constitutionally sufficient; those justices who argued for rational basis did so in dissent.⁴³ But *Casey* was a generation ago, and some viewed the Roberts Court’s intervening *Gonzales v. Carhart* decision as having lowered the standard to something close to rational basis (a conclusion that required overlooking Justice Kennedy’s admonition in that case that “the Court retains an independent constitutional duty to review factual findings where constitutional rights are at stake”).⁴⁴ On November 13, 2015, the Supreme Court agreed to hear the clinics’ appeal of the Fifth Cir-

cuit's decision. What the decision would be was anyone's guess.

Issued on June 27, 2016, the Court's decision in *Whole Woman's Health v. Hellerstedt* invalidated both requirements of the Texas statute.⁴⁵ And it did much more. It reanimated the undue-burden standard, making clear that the appeals court had been mistaken in its unquestioning deference to the legislature's health claims. Judge Yeakel had been correct to test those claims against the medical evidence available. Justice Stephen Breyer wrote for the five-to-three majority. "For a district court to give significant weight to evidence in the judicial record in these circumstances is consistent with this Court's case law," Justice Breyer said. He explained that, contrary to the Fifth Circuit's complaint, the District Court

did not simply substitute its own judgment for that of the legislature. It considered the evidence in the record – including expert evidence presented in stipulations, depositions, and testimony. It then weighed the asserted benefits against the burdens. We hold that, in so doing, the District Court applied the correct legal standard.⁴⁶

With a minimum of rhetoric – there are no ringing phrases in Justice Breyer's twenty-page opinion – but a plethora of facts, the Court demolished the state's justification for its clinic-closing law. On the benefit side of the benefit-versus-burden equation, Justice Breyer recounted the evidence Judge Yeakel had compiled about the safety record for abortion in Texas, concluding that "there was no significant health-related problem that the new law helped to cure."⁴⁷ Without labeling the law as abortion exceptionalism, he noted that although abortion is fourteen times safer than childbirth, Texas "allows a midwife to oversee childbirth in the patient's own home," and that while liposuction has a

twenty-eight times higher mortality rate than abortion, there are no similar surgical-center requirements for performing that procedure on an outpatient basis.⁴⁸

Reviewing the evidence underlying the admitting privileges requirement, Justice Breyer said that "without dispute," the basis on which admitting privileges are granted in the context of abortion has "nothing to do with ability to perform medical procedures" and "does not serve any relevant credentialing function." There was a "virtual absence of any health benefit," he said in recalling one of the most dramatic moments of the March 2, 2016, oral argument: "When directly asked at oral argument whether Texas knew of a single instance in which the new requirement would have helped even one woman obtain better treatment, Texas admitted that there was no evidence in the record of such a case."⁴⁹

Having dispensed with the health justification, the Court then turned to the burden the new requirements had already imposed on the clinics and would predictably impose on Texas women's access to abortion. Justice Breyer noted that the closing of half of the state's abortion clinics, with the imminent prospect of more closings once the surgical-center requirement went into effect, "meant fewer doctors, longer waiting times, and increased crowding," along with more than quadrupling, to four hundred thousand, the number of women of reproductive age living more than 150 miles from an abortion provider.⁵⁰ He said that "in the face of no threat to women's health, Texas seeks to force women to travel long distances to get abortion in crammed-to-capacity superfacilities. Patients seeking these services are less likely to get the kind of individualized attention, serious conversation, and emotional support that doctors at less taxed facilities may have offered." It was a "commonsense inference," Justice Breyer concluded, "that

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these effects would be harmful to, not supportive of, women's health."⁵¹

The decision was cheered in the medical community. An article in *Obstetrics & Gynecology* declared that the decision's analytical framework

recalibrates the debate over abortion laws from one that has too often been mired in rancor and rhetoric to one that is rooted in data and science. . . . With *Hellerstedt*, the Supreme Court has not only "talked the talk" about the importance of evidence, but has "walked the walk" by allowing that evidence to drive its analysis.⁵²

The Court's appreciation of the impact of abortion restrictions on the lives of actual women is a distinctive feature of the decision.⁵³ To that extent, *Whole Woman's Health* is abortion-specific. The decision is likely to prove useful in attacking other scientifically unsupported abortion restrictions. One example is the prohibition adopted in some states against the use of telemedicine for dispensing the pills prescribed for terminating first-trimester pregnancies. Another are the bans that states are now imposing on abortion beginning at twenty weeks of pregnancy, based on the unsupported claim that a fetus, while not viable at that gestational age, feels pain.⁵⁴ The decision may also be useful in challenging mandatory counseling laws that require doctors to give women false information about the consequences of abortion, such as warning that abortion increases the risk of breast cancer and suicide. Both those claims have been extensively studied and refuted.⁵⁵

But whether *Whole Woman's Health* may help in challenging another category of abortion restrictions – those adopted not in the name of protecting women, but rather to express the state's interest in protecting unborn life – remains an open question. One example is a Texas law enacted in 2017 to require fetal remains obtained through abortion (although not through miscar-

riage) to be cremated or buried. That this law will serve to increase the cost of abortion is clear, although the means for attacking the law are less so.⁵⁶ By personifying the fetus, the law is also likely, not coincidentally, to increase the stigma attached to abortion, a burden already felt by women who choose to terminate a pregnancy. Research has shown that most women try to keep their abortions secret out of concern for how even close friends and family would respond.⁵⁷ Texas describes its motive as a desire to express the state's view of the dignity of unborn life, a state interest that the Supreme Court's abortion jurisprudence protects. With the case now being litigated, it remains to be seen how the revived undue-burden analysis of *Whole Woman's Health* will apply in this context. There is no reason it should not. The undue-burden standard itself derives from *Casey*, which applied it to regulations explicitly aimed at protecting unborn life.

It is nonetheless evident that legislatures and courts with antiabortion majorities are not accepting the lessons of *Whole Woman's Health* without protest.⁵⁸ Arkansas is defending a 2015 law that requires doctors who provide medication abortions – the abortion-inducing drugs administered to terminate early pregnancies – to have a signed contract with a doctor who has admitting privileges at a local hospital in the case of an emergency. The state's claimed rationale is to protect women's health. Medication abortion is extremely safe; fewer than one-third of 1 percent of such abortions result in any adverse event. (Nor is telemedicine, which eighteen states prohibit for medication abortions, any less safe, according to a recent article in *Obstetrics & Gynecology*.)⁵⁹ The local Planned Parenthood affiliate testified that it could not find a physician willing to sign a contract, and would therefore have to stop providing medication abortions at its two clinics; it provided no surgi-

cal abortions at those facilities. That would leave only one provider in the state, in Little Rock. A federal district judge enjoined the law in March 2016, finding that the burden on women seeking abortions – which for women living in Fayetteville would include two 380-mile round-trips to Little Rock – outweighed any asserted benefit.⁶⁰ In July 2017, the U.S. Court of Appeals for the Eighth Circuit lifted the injunction. The court cited *Whole Woman's Health* without actually applying it, instead finding the district court's analysis of the law's burden too "amorphous" without making any effort to analyze the law's asserted benefit. The district court had "failed to make factual findings estimating the number of women burdened by the statute," the appeals court complained.⁶¹ It is difficult to read the Eighth Circuit's opinion as anything other than a deliberate evasion of the Supreme Court's mandate in *Whole Woman's Health*. Clearly, in the hands of abortion-hostile courts, *Whole Woman's Health* is not the complete answer to legislatures that invoke bad science, or no science at all, in their crusade to cut off women's access to abortion. Planned Parenthood sought Supreme Court review, but on May 29,

2018, the court denied the petition without comment or noted dissent.⁶² Under the terms of the Eighth Circuit's order, the case returned to the district court for more factual development. On July 2, 2018, following a new hearing and additional briefing, Federal District Judge Kristine G. Baker issued a new injunction. She found that the law posed "a threat of irreparable harm" to the plaintiffs that "outweighs the immediate interests and potential injury to the state."⁶³

Outside the highly politicized context of abortion, it would be reassuring to suppose that *Whole Woman's Health* might strengthen the Supreme Court's resolve to use the legal tools available to separate scientific knowledge from agenda-driven claims that masquerade as science. In *Whole Woman's Health*, evidence-based law met evidence-based medicine in a manner that should serve as a template for judicial encounters with the science and technology that will increasingly shape the world that judges, along with the rest of us, inhabit. Whether it has a chance of filling that role depends on politics and on future appointments to the Court – contingencies that even the best science cannot control.

ENDNOTES

¹ *Association for Molecular Pathology v. Myriad Genetics, Inc.*, 133 S. Ct. 2107, 2120 (2013), Antonin Scalia concurring in part and concurring in the judgment. The decision, with an opinion by Justice Clarence Thomas, rejected patentability for naturally occurring DNA but not for the synthetic variant the company had created, known as complementary DNA or cDNA.

² *Moore v. Texas*, 137 S. Ct. 1039, 1051, 1053 (2017).

³ *Ibid.*, 1058, John Roberts dissenting.

⁴ Of many recent examples of the Court's struggles with science and technology, one of the more interesting was *City of Ontario v. Quon*, 560 U.S. 746 (2010). In this case, a public employee challenged the employer's right to search the text messages on his office-issued pager. The case attracted considerable notice while it was pending in the expectation that the Court might issue a broad rule on the privacy of people's electronic devices. But the Court instead rejected the employee's claim on narrow grounds, with Justice Kennedy explaining that "[r]apid changes in the dynamics of communication and information transmission are evident not just in the technology itself but in what society accepts as proper behavior. . . . At present, it is uncertain how workplace norms, and the law's treatment of them, will evolve. . . . A broad

- holding concerning employee's privacy expectations vis-à-vis employer-provided technological equipment might have implications for future cases that cannot be predicted. It is preferable to dispose of this case on narrower grounds." *Ibid.*, 759–760. In 2018, the Court did grapple with the privacy implications of electronic devices, holding that the police generally need a warrant to obtain the moment-by-moment location information that wireless carriers automatically acquire from their customers' smartphones. See *Carpenter v. United States*, 16-402, June 22, 2018.
- ⁵ John A. Robertson, "Science Disputes in Abortion Law," *Texas Law Review* 93 (2015): 1849, 1850.
- ⁶ See, for example, *Williamson v. Lee Optical Co.*, 348 U.S. 483 (1955).
- ⁷ *Regents of the University of California v. Bakke*, 438 U.S. 265 (1978).
- ⁸ For an extended discussion of the role of medicine in the Court's abortion jurisprudence, see Nan D. Hunter, "Justice Blackmun, Abortion, and the Myth of Medical Independence," *Brooklyn Law Review* 72 (2006): 147, 149.
- ⁹ *Roe v. Wade*, 410 U.S. 113, 163–164 (1973).
- ¹⁰ *Ibid.* The Court held that during the second trimester, when abortion carried greater risk, the state could regulate the procedure for the purpose of protecting the pregnant woman's health.
- ¹¹ *Roe's* author, Justice Harry A. Blackmun, had been general counsel of the Mayo Clinic before becoming a federal judge, and had a lifelong interest in medicine and appreciation for its practice. While working on his opinion, he visited Mayo, in Rochester, Minnesota, where the library staff had compiled for him a file of abortion-related articles. See Linda Greenhouse, *Becoming Justice Blackmun: Harry Blackmun's Supreme Court Journey* (London: Macmillan, 2005), 90–91.
- ¹² Commenting on what she called "the myth of medical independence," Nan D. Hunter observed that "the Justices who decided *Roe* shared a liberal belief in the value of medical authority because they assumed it to be a sphere which could operate independently of the state." Hunter, "Justice Blackmun, Abortion, and the Myth of Medical Independence," 147, 149 [see note 8]. A fact little noticed today is that the main impetus for abortion reform in the late 1950s and early 1960s came not from feminists, but from leaders in the public health community, concerned about the health consequences of illegal abortion, particularly for women without the economic means or sophistication to find safer options. See, for example, Linda Greenhouse and Reva B. Siegel, *Before Roe v. Wade: Voices That Shaped the Abortion Debate Before the Supreme Court's Ruling*, 2nd ed. (New Haven, Conn.: Yale Law Library, 2012), 22–29, <http://documents.law.yale.edu/before-roe>.
- ¹³ *Colautti v. Franklin*, 439 U.S. 379, 401 (1979).
- ¹⁴ *Akron v. Akron Center for Reproductive Health, Inc.*, 462 U.S. 416 (1983); overruled by *Planned Parenthood of Southeastern Pennsylvania v. Casey*, 505 U.S. 833 (1992).
- ¹⁵ *Akron v. Akron Center for Reproductive Health, Inc.*, 458, Sandra Day O'Connor dissenting.
- ¹⁶ *Ibid.*, 457–458.
- ¹⁷ *Webster v. Reproductive Health Services, Inc.*, 492 U.S. 490 (1989).
- ¹⁸ Kathryn Kolbert, "The *Webster Amicus Curiae* Briefs: Perspectives on the Abortion Controversy and the Role of the Supreme Court," *American Journal of Law and Medicine* 15 (2 and 3) (1989): 153, 154. Major Supreme Court cases now attract more than one hundred *amicus* briefs. The current record was set in the same-sex marriage case, in which 139 were filed; see *Obergefell v. Hodges*, 135 S. Ct. 2071 (2015).
- ¹⁹ Brief of the American Medical Association et al. as Amici Curiae in Support of Appellees at 7, *Webster v. Reproductive Health Services, Inc.*, 492 U.S. 490 (1989).
- ²⁰ *Ibid.*, 8. Were that brief to be written today, the doctors might have felt compelled to acknowledge recent progress toward creating an artificial womb, remote as the prospect appears that it might actually be of use to humans. See, for example, Rob Stein, "Scientists Create Artificial Womb That Could Help Prematurely Born Babies," NPR All Things Considered, April

25, 2017, <http://www.npr.org/sections/health-shots/2017/04/25/525044286/scientists-create-artificial-womb-that-could-help-prematurely-born-babies?sc=17&f=1001>.

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²¹ *Webster v. Reproductive Health Services, Inc.*, 490, 406, Sandra Day O'Connor concurring in part and concurring in the result.

²² *Planned Parenthood of Southeastern Pennsylvania v. Casey* 505 U.S. 833 (1992).

²³ *Ibid.*, 877.

²⁴ The decision overturned the relevant parts of the *Akron* decision and of a subsequent decision, *Thornburgh v. American College of Obstetricians and Gynecologists*, 476 U.S. 747 (1986).

²⁵ *Ibid.*, 878.

²⁶ *Gonzales v. Carhart*, 550 U.S. 124 (2007).

²⁷ *Ibid.*, 143 – 144.

²⁸ *Ibid.*, 165 – 166.

²⁹ Americans United for Life, *Defending Life*, 2018 ed. (Washington, D.C.: Americans United for Life, 2018), 18, <http://www.aul.org/defending-life-2018>. President Trump named Charmaine Yoest, the organization's longtime president and CEO, as an assistant secretary of the Department of Health and Human Services, a position she left after a year.

³⁰ *Ibid.*, 20.

³¹ Linda Greenhouse and Reva B. Siegel, "Casey and the Clinic Closings: When 'Protecting Health' Obstructs Choice," *Yale Law Journal* 125 (5) (2016): 1428, 1446 – 1449.

³² Scott Cunningham, Jason M. Lindo, Caitlin Myers, and Andrea Schlosser, "How Far is Too Far? New Evidence on Abortion Clinic Closures, Access, and Abortion," National Bureau of Economic Research Working Paper 23366 (Cambridge, Mass.: National Bureau of Economic Research, 2017), 2, <http://www.nber.org/papers/w23366>.

³³ David Dewhurst (@DavidHDewhurst), Twitter post, June 10, 2013, 7:41 a.m., <http://twitter.com/DavidHDewhurst/status/347363442497302528/photo/1>, <http://perma.cc/3QF2-U6QQ>.

³⁴ *Planned Parenthood of Greater Texas Surgical Health Services v. Abbott*, 951 F. Supp. 2d 891, 900 (W.D. Tex. 2013).

³⁵ *Ibid.*

³⁶ *Planned Parenthood of Greater Texas Surgical Health Services v. Abbott* [*Abbott I*], 734 F. 3d 406 (5th Cir. 2013). The Supreme Court refused to vacate the appeals court's stay of the district court injunction. In a subsequent opinion, 748 F. 3d 583 (5th Cir. 2014) [*Abbott II*], the Fifth Circuit addressed Judge Yeakel's opinion on the merits and overturned it.

³⁷ *Abbott II*, 748 F. 3d at 596 [see note 36]; emphasis in original.

³⁸ *Ibid.*, 594.

³⁹ *Whole Woman's Health v. Lakey*, 46 F. Supp. 3d 673 (W.D. Tex. 2014).

⁴⁰ *Whole Woman's Health v. Lakey*, 769 F. 3d 285, 297 (5th Cir. 2014).

⁴¹ *Planned Parenthood of Wisconsin, Inc. v. Van Hollen*, 738 F. 3d 786, 789 (7th Cir. 2013).

⁴² *Ibid.*, 798.

⁴³ See Greenhouse and Siegel, "Casey and the Clinic Closings," 1435 [see note 31], citing *Casey* at 505 U.S. 966, William Rehnquist concurring in the judgment in part and dissenting in part.

⁴⁴ *Gonzales v. Carhart*, 550 U.S. 124, 165 – 166 (2007).

⁴⁵ *Whole Woman's Health v. Hellerstedt*, 136 S. Ct. 2292 (2016). Justice Breyer's opinion was joined by Justices Kennedy, Ginsburg, Kagan, and Sotomayor. Justice Alito wrote a dissenting opinion that was joined by Chief Justice Roberts and by Justice Thomas, who also wrote a separate dissenting opinion. Justice Scalia died shortly before the case was argued.

- ⁴⁶ Ibid., 2310.
- ⁴⁷ Ibid., 2311.
- ⁴⁸ Ibid., 2314.
- ⁴⁹ Ibid., 2311 – 2313.
- ⁵⁰ Ibid., 2313.
- ⁵¹ Ibid., 2318.
- ⁵² Joanne D. Rosen, “Finding Strength in Numbers: The Critical Role of Data in *Whole Woman’s Health v. Hellerstedt*,” *Obstetrics & Gynecology* 129 (1) (2017): 195, 196.
- ⁵³ See Linda Greenhouse and Reva B. Siegel, “The Difference a Whole Woman Makes: Protection for the Abortion Right After *Whole Woman’s Health*,” *Yale Law Journal* 126 (2016): 149, 161.
- ⁵⁴ Ibid.
- ⁵⁵ See, for example, the published studies discussed in Rachel Benson Gold and Elizabeth Nash, “Flouting the Facts: State Abortion Restrictions Flying in the Face of Science,” *Guttmacher Policy Review* 20 (2017): 53, 56. The suicide warning, mandated by a South Dakota law, was upheld by a federal appeals court; see *Planned Parenthood v. Rounds*, 686 F. 3d 998 (8th Cir. 2012). A 2018 study published online in the *American Journal of Psychiatry* followed women for five years after they either received or were denied an abortion to see whether women in either group were at greater risk of suicide. The author found no greater risk for either, and observed that “For women having an abortion, we found that the proportion with any symptoms did not increase but rather decreased over the 5-year period.” The article concluded: “Thus, policies requiring that women be warned that they are at increased risk of becoming suicidal if they choose abortion are not evidence based.” M. Antonia Biggs, “Five-Year Suicidal Ideation Trajectories Among Women Receiving or Being Denied an Abortion,” *American Journal of Psychiatry* Online, May 24, 2018, <https://doi.org/10.1176/appi.ajp.2018.18010091>.
- ⁵⁶ The law has been enjoined on a pre-enforcement challenge in Federal District Court. *Whole Woman’s Health v. Hellerstedt*, No. A-16-CA-1300-SS (W.D. Tex. 2017). The state is appealing. Marissa Evans, “Federal Court Blocks Texas Fetal Remains Burial Rule,” *Texas Tribune*, January 27, 2017, <https://www.texastribune.org/2017/01/27/fetal-remains-ruling/>.
- ⁵⁷ See, for example, The University of Chicago, “Accessing Abortion in Illinois: A Guide for Healthcare and Social Service Providers – Understanding Abortion Stigma and Shame,” <https://abguide.uchicago.edu/page/understanding-abortion-stigma-and-shame> (accessed December 7, 2017).
- ⁵⁸ For a compilation of lower court cases as of November 2017, see Leah M. Litman, “Unduly Burdening Women’s Health: How Lower Courts Are Undermining *Whole Woman’s Health v. Hellerstedt*,” *Michigan Law Review Online* 116 (2017): 50.
- ⁵⁹ Daniel Grossman and Kate Grindlay, “Safety of Medical Abortion Provided through Telemedicine Compared with In Person,” *Obstetrics & Gynecology* 130 (4) (2017): 778 – 782.
- ⁶⁰ *Planned Parenthood of Arkansas & Eastern Oklahoma v. Jegley* (E.D. Ark.), 2016 WL 6211310.
- ⁶¹ *Planned Parenthood of Arkansas & Eastern Oklahoma v. Jegley*, 864 F. 3d 953 (8th Cir., 2017).
- ⁶² *Planned Parenthood of Arkansas & Eastern Oklahoma v. Jegley*, 17-935, cert. den. May 29, 2018.
- ⁶³ *Planned Parenthood of Arkansas & Eastern Oklahoma v. Jegley*, case 4:15-cv-00784-KGB (July 2, 2018) at 147.