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Previability Abortion and the Pain of the Unborn

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Previability Abortion and the Pain of the Unborn

Teresa S. Collett*

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I. Introduction

One of the most basic and widely accepted principles of political governance is that that the state is justified in promulgating laws to protect individuals from harm by others.¹ The state's power to legislate and protect against a variety of

* Professor of Law, University of St. Thomas School of Law, Minneapolis, MN. Teresa Stanton Collett, *Fetal Pain Legislation: Is It Viable?*, 30 PEPP. L. REV. 161 (2003).

1. See, e.g., THE DECLARATION OF INDEPENDENCE para. 2 (U.S. 1776) (“[A]ll men are created equal, that they are endowed by their Creator with certain unalienable Rights, that among these are Life, Liberty and the pursuit of Happiness.—That to secure these rights, Governments are instituted among Men, deriving their just powers from the consent of the governed . . .”).

harms, including the harm of being made to suffer physical pain, has been recognized in both domestic² and international law.³ “The Government of course has an obligation to protect its citizens from harm.”⁴ The exercise of this power is up to the prudential judgment of our state and national legislatures, however, and is not a constant constitutional imperative.⁵

This power of protection encompasses all living creatures,⁶ as well as developing fetal human life.⁷ Thirteen states and the House of Representatives have passed legislation that strictly limits abortions during the second half of the pregnancy, generally after nineteen weeks gestation,⁸ to protect the developing human person from pain.⁹ These laws, known as Pain-

2. *See, e.g.*, 18 U.S.C. § 2340 (2012) (criminalizing and defining torture as “an act committed by a person acting under the color of law specifically intended to inflict severe physical or mental pain or suffering (other than pain or suffering incidental to lawful sanctions) upon another person within his custody or physical control”).

3. *See, e.g.*, Convention Against Torture and Other Cruel, Inhuman or Degrading Treatment or Punishment, art. 2, Dec. 10, 1984, 1465 U.N.T.S. 85, available at <http://www.unhcr.org/refworld/docid/3ae6b3a94.html> (“Each State Party shall take effective legislative, administrative, judicial or other measures to prevent acts of torture in any territory under its jurisdiction.”).

4. *Piemonte v. United States*, 367 U.S. 556, 559 n.2 (1961).

5. *See DeShaney v. Winnebago Cnty. Dep’t of Soc. Servs.*, 489 U.S. 189, 195 (1989) (rejecting a claim against local child-protection officials who, after notice of possible abuse, failed to protect a child from beatings by his father that left the child severely brain damaged).

6. *See* HENRY COHEN, CONG. RESEARCH SERV., BRIEF SUMMARIES OF FEDERAL ANIMAL PROTECTION STATUTES (2009), http://www.animallaw.info/articles/art_pdf/aruscohen2009fedlawssummaries.pdf (listing federal animal protection statutes and providing an overview of each).

7. *See Planned Parenthood of Se. Pa. v. Casey*, 505 U.S. 833, 873 (1992) (recognizing the state’s potentially paramount interest in protecting fetal life without limitation to *Roe’s* trimester categories).

8. ALA. CODE § 26-23B-5(a) (2012); ARK. CODE ANN. § 20-16-1304(a) (2012); ARIZ. REV. STAT. ANN. § 36-2159(b) (2012); GA. CODE ANN. § 16-12-141(c)(1) (2012); IDAHO CODE ANN. § 18-505 (2012); IND. CODE ANN. § 16-34-2-1(a) (2012); KAN. STAT. ANN. § 65-6724(c)(2) (2012); LA. REV. STAT. ANN. § 40:1299.30.1(E)(1) (2012); NEB. REV. STAT. § 28-3,106 (2012); N.C. GEN. STAT. ANN. § 14-45.1 (2012); N.D. CENT. CODE § 14-02.1-05.3(3) (2012); OKLA. STAT. ANN. tit. 63, § 1-745.5(A) (2012); TEX. HEALTH & SAFETY CODE ANN. § 171.044 (2013); Pain-Capable Unborn Child Protection Act, H.R. 1797, 113th Cong. (2013).

9. *See Planned Parenthood Minn., N.D., S.D. v. Rounds*, 530 F.3d 724, 735–36 (8th Cir. 2006) (en banc) (upholding a South Dakota law requiring that women be informed that abortion ends the “life of a whole, separate, unique, living human being,” and finding that opponents of the definition provided “no

Capable Child Protection Acts, strictly limit abortion after the point of gestation when the unborn child has developed the capacity to feel pain during the process of an abortion.¹⁰

Proponents argue that protecting an unborn child from such pain is a natural extension of the long tradition in American law prohibiting acts that inflict unwarranted suffering on human beings and other sentient creatures.¹¹ Opponents argue that such laws are based on scientific speculation and inflammatory rhetoric.¹² Given the large number of states adopting Pain-Capable Child Protection Acts, it is no surprise that these arguments are now before federal courts. This Article explores the arguments supporting the existence of fetal pain and the constitutionality of abortion limits at twenty weeks gestation.

II. *Fetal Pain and the Partial-Birth Abortion Ban*

The question of whether and when the unborn child feels pain is not new. Since the early 1980s, there has been extensive

evidence to the oppose that conclusion”).

10. See David F. Forte, *Life, Heartbeat, Birth: A Medical Basis for Reform*, 74 OHIO ST. L.J. 121, 134 (2013) (“[S]tates have passed a version of the Pain-Capable Unborn Child Protection Act. The Act prohibits abortion after twenty weeks of pregnancy based on the State’s assessment of medical evidence that the unborn child could experience pain as early as twenty weeks.” (footnotes omitted)).

11. See Teresa Stanton Collett, *Fetal Pain Legislation: Is It Viable?*, 30 PEPP. L. REV. 161, 171 (2003) [hereinafter Collett, *Fetal Pain Legislation*] (discussing the history of abortion laws enacted to “minimize fetal suffering”); Katherine E. Engelman, *Fetal Pain Legislation: Protection Against Pain Is Not an Undue Burden*, 10 QUINNIPIAC HEALTH L.J. 279, 312 (2007) (explaining that the government “also regulate[s] the pain inflicted on other sentient creatures such as laboratory animals and livestock”); Kevin Walsh, Note, *The Science, Law and Politics of Fetal Pain*, 115 HARV. L. REV. 2010, 2031–32 (2002) (noting other areas of law, specifically animal cruelty, where reform occurred to prevent other sentient beings from suffering).

12. See, e.g., Harper Jean Tobin, *Confronting Misinformation on Abortion: Informed Consent, Deference, and Fetal Pain Laws*, 17 COLUM. J. GENDER & L. 111, 152 (2008) (“Statements about fetal pain currently in place in several states are questionably accurate and clearly misleading.”); Lindsay J. Calhoun, Comment, *The Painless Truth: Challenging Fetal Pain-Based Abortion Bans*, 87 TUL. L. REV. 141, 151 (2012) (“[A]s detractors have noted, the language of the legislative findings is extremely misleading with regard to medical support and certainty.” (footnote omitted)).

debate about whether the unborn experience pain during abortion.¹³ President Reagan brought this issue squarely into public view in 1984 when he said, “when the lives of the unborn are snuffed out [by abortion], they often feel pain, pain that is long and agonizing.”¹⁴ This debate reemerged and intensified when the world caught a glimpse of life within the womb through the picture of Samuel Armas’s tiny hand apparently grasping the finger of his perinatal surgeon who was repairing Samuel’s spine when he was only twenty-one weeks in gestation.¹⁵

The debate over fetal pain made its way into the courts after the passage of state and federal bans of a procedure commonly known as “partial-birth abortion.”¹⁶ In ruling on the constitutionality of the federal ban, Judge Richard C. Casey, sitting in the Southern District of New York, called the procedure “gruesome, brutal, barbaric, and uncivilized.”¹⁷ He found that

13. See Engelman, *supra* note 11, at 281 (discussing the debate about fetal pain).

14. Ronald Reagan, U.S. President, Address to the National Religious Broadcasters Convention (Jan. 30, 1984), available at <http://www.americanrhetoric.com/speeches/ronaldreagannrbroadcasters.htm>; see also John T. Noonan, Jr., *The Experience of Pain by the Unborn*, in *NEW PERSPECTIVES ON HUMAN ABORTION* 205, 205 (Thomas W. Hilgers et al. eds., 1981) (“One aspect of the abortion question which has not been adequately investigated is the pain experienced by the object of an abortion.”); Cristine Russell, *Physician Group Supports President on Fetus Pain: Human Nervous System Early Development in Life, Group of Abortion Opponents Says*, WASH. POST, Feb. 14, 1984, at A6 (“Twenty-six physicians wrote President Reagan yesterday in support of his recent statement that fetuses often suffer ‘long and agonizing’ pain during abortion.”).

15. *History or Hoax*, MICHAEL CLANCY, <http://www.michaelclancy.com/index.html> (last visited Mar. 6, 2014) (discussing the photograph of Samuel Armas and providing the famous photograph) (on file with the Washington and Lee Law Review).

16.

The federal partial-birth abortion ban prohibits a physician from deliberately and intentionally vaginally deliver[ing] a living fetus until, in the case of a head-first presentation, the entire fetal head is outside the body of the mother, or, in the case of breech presentation, any part of the fetal trunk past the navel is outside the body of the mother, for the purpose of performing an overt act that the person knows will kill the partially delivered living fetus.

18 U.S.C. § 1531(b)(1)(A) (2012); see also *Gonzales v. Carhart*, 550 U.S. 124, 142 (2007) (discussing 18 U.S.C. § 1531).

17. *Nat’l Abortion Fed’n v. Ashcroft*, 330 F. Supp. 2d 436, 479 (S.D.N.Y. 2004).

abortion procedures “subject fetuses to severe pain.”¹⁸ In contrast, Judge Phyllis J. Hamilton of the Northern District of California arrived at a different conclusion. She wrote that “much of the debate on this issue is based on speculation and inference”¹⁹ and that “the issue of whether fetuses feel pain is unsettled in the scientific community.”²⁰ These divergent conclusions illustrate the key factual battle involved in challenges to Pain-Capable Child Protection Acts—when does the unborn child develop the capacity to feel pain?

III. Defining Our Terms

Before attempting to answer the questions of “whether” and “when” an unborn child or human fetus “feels pain,” it is necessary to establish what the words “feels” and “pain” mean in this context.²¹ Much of the disagreement on the existence and extent of the unborn child’s pain can be explained by the absence of a common definition of these key terms. There are three competing definitions of “fetal pain” arising from whether “feels” means to have a “conscious appreciation of” or merely “experience,” and from the question of how such appreciation or experience can be ascertained.

A. Conscious Appreciation

Some physicians and scientists restrictively define “feels” to mean only those responses that reflect some self-awareness or “conscious appreciation of pain.”²² “Pain is a subjective sensory

18. *Id.*

19. *Planned Parenthood Fed’n v. Ashcroft*, 320 F. Supp. 2d 957, 997 (N.D. Cal. 2004).

20. *Id.* at 1002.

21. Adrian R. Lloyd-Thomas & Maria Fitzgerald, *Reflex Responses Do Not Necessarily Signify Pain*, 313 BRIT. MED. J. 797, 797 (1996), available at <http://www.bmj.com/content/313/7060/797>.

22. See Stuart W.G. Derbyshire, *Can Fetuses Feel Pain?*, 332 BRIT. MED. J. 909, 911 (2006), available at <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC1440624/> (“Without consciousness there can be nociception but there cannot be pain.”); David James Mellor et al., *Fetal “Awareness” and “Pain”: What Precautions Should Be Taken to Safeguard Fetal Welfare During Experiments?*,

and emotional experience that requires the presence of consciousness to permit recognition of a stimulus as unpleasant.”²³ In the absence of consciousness, they argue that the most researchers can conclude from the medical and scientific evidence is that the human fetus “reacts to physical stimulation.”²⁴

Whether the fetus feels pain, however, hinges not on its biological development but on its conscious development. Unless it can be shown that the fetus has a conscious appreciation of pain after 26 weeks, then the responses to noxious stimulation must still essentially be reflex, exactly as before 26 weeks.²⁵

SIXTH WORLD CONGRESS ON ALTERNATIVES & ANIMAL USE LIFE SCI. PROC., Mar. 31, 2008, at 79, 80, *available at* <http://www.slideshare.net/SDRTL/fetal-awareness-and-pain> (“For a living animal to experience pain and to suffer as a result it must . . . have a nervous system that is sophisticated enough . . . [and] [i]t must be conscious—an animal cannot suffer while it is unconscious.”); Zbigniew Szawarski, *Probably No Pain in the Absence of “Self”*, 313 BRIT. MED. J. 796, 796 (1996), *available at* <http://www.bmj.com/content/313/7060/796.2> (“Thus pain has a dual nature. As a subjective, conscious feeling it is always *my* pain happening inside or on my body and nobody else can experience it.”).

23. Susan J. Lee et al., *Fetal Pain: A Systematic Multidisciplinary Review of the Evidence*, 294 J. AM. MED. ASS’N 947, 948 (2005), *available at* <http://jama.jamanetwork.com/article.aspx?articleid=201429>; *see also* Carlo Valerio Bellieni & Giuseppe Buonocore, *Is Fetal Pain a Real Evidence?*, 25 J. MATERNAL-FETAL & NEONATAL MED. 1203, 1205 (2012) (“Our data show that there is consistent evidence of the possibility for the fetus to experience pain in the third trimester, and this evidence is weaker before this date and null in the first half of pregnancy.”); ROYAL COLL. OF OBSTETRICIANS AND GYNAECOLOGISTS, FETAL AWARENESS: REVIEW OF RESEARCH AND RECOMMENDATIONS FOR PRACTICE 11 (2010) [hereinafter FETAL AWARENESS], <http://www.rcog.org.uk/files/rcog-corp/RCOGFetalAwarenessWPR0610.pdf> (“The lack of cortical connections before 24 weeks . . . implies that pain is not possible until after 24 weeks. Even after 24 weeks, there is continuing development and elaboration of intracortical networks.”).

24. *See* Hugh Muir, *When Does Pain Begin?*, THE DAILY TEL., Sept. 28, 1996, at 8

Groups such as the Birth Control Trust, whose director Ann Furedi co-wrote one of the papers, admit that the foetus reacts to physical stimulation, such as procedures involving needles, from around 12 to 14 weeks. They agree that stress levels can rise in these circumstances. But they argue that the mere reaction to physical stimuli does not automatically indicate the feeling of pain.

See also Lee et al., *supra* note 23, at 947 (“[P]ain perception probably does not function before the third trimester.”).

25. Stuart Derbyshire & Ann Furedi, *“Fetal Pain” Is a Misnomer*, 313 BRIT.

This reasoning was embraced by the federal district court in *Women's Medical Professional Corp. v. Voinovich*.²⁶ The court concluded that the state could not justify a ban on partial-birth abortion, as preventing unnecessary cruelty to the fetus, due to the absence of medical testimony that the fetus “experiences a conscious awareness of pain.”²⁷ In essence, the court reasoned that absent evidence that the fetus had “mindful awareness” of noxious stimuli,²⁸ there can be no pain, and in the absence of pain, there can be no cruelty.²⁹

MED. J. 795, 795 (1996), available at <http://www.bmj.com/content/313/7060/795.2>; see also FETAL AWARENESS, *supra* note 23, at 11 (“[T]he cortex is necessary for pain perception; cortical activation correlates strongly with pain experience and an absence of cortical activity generally indicates an absence of pain experience. The lack of cortical connections before 24 weeks, therefore, implies that pain is not possible until after 24 weeks.”).

26. See *Women's Med. Prof'l Corp. v. Voinovich*, 911 F. Supp. 1051, 1074 (S.D. Ohio 1995) (“Until medical science advances to a point at which the determination of when a fetus becomes ‘conscious’ can be made within a reasonable degree of certainty, neither doctors nor judges nor legislators can definitively state . . . when the fetus becomes aware of pain.”).

27. *Id.* In *Stenberg v. Carhart*, 530 U.S. 914 (2000), Justice Kennedy provided a layperson's description of partial-birth abortion or the D & X procedure:

In the D & X, the abortionist initiates the woman's natural delivery process by causing the cervix of the woman to be dilated, sometimes over a sequence of days. The fetus' arms and legs are delivered outside the uterus while the fetus is alive; witnesses to the procedure report seeing the body of the fetus moving outside the woman's body. At this point, the abortion procedure has the appearance of a live birth With only the head of the fetus remaining in utero, the abortionist tears open the skull. According to Dr. Martin Haskell, a leading proponent of the procedure, the appropriate instrument to be used at this stage of the abortion is a pair of scissors. Witnesses report observing the portion of the fetus outside the woman react to the skull penetration. The abortionist then inserts a suction tube and vacuums out the developing brain and other matter found within the skull. The process of making the size of the fetus' head smaller is given the clinically neutral term “reduction procedure.” Brain death does not occur until after the skull invasion, and, according to Dr. Carhart, the heart of the fetus may continue to beat for minutes after the contents of the skull are vacuumed out. The abortionist next completes the delivery of a dead fetus, intact except for the damage to the head and the missing contents of the skull.

Id. at 959–60 (Kennedy, J., dissenting) (internal citations omitted).

28. *Women's Med. Prof'l Corp.*, 911 F. Supp. at 1073.

29. *Id.* at 1074; see also Interview by Bob Abernethy with Peter Singer, Professor, Princeton Univ., in *Religion & Ethics Newsweekly* (PBS television

B. Behavioral and Physiological Responses

Other physicians and scientists have rejected the requirement of consciousness as a predicate to the experience of pain. These doctors argue that observed physiological³⁰ and behavioral responses³¹ to noxious stimuli are reliable indicators of pain, particularly for those individuals who are not capable of the self-reporting.³² Even those who deny the existence of fetal pain prior to self-consciousness concede unborn children respond to painful stimuli at or before eighteen weeks of gestation:

It is known that the fetus withdraws from a needle from about 18 weeks and also launches a stress response following needle puncture. The stress response includes the release of hormones and neurotransmitters dependent on activity in areas of the midbrain. These findings confirm that signals about tissue damage are transmitted from the spinal cord and brainstem to the midbrain from at least 18 weeks.³³

Physicians and scientists recognizing the existence of fetal pain prior to viability argue that absent the ability to self-report, physical evidence of pain-like responses should be viewed as “infantile forms of self-report and should not be discounted as ‘surrogate measures’ of pain.”³⁴ While conceding the lack of

broadcast Sept. 10, 1999) (“Killing a newborn baby—whether able-bodied or not—I think, is never equivalent to killing a being who wants to go on living. It’s different. It’s still—almost always wrong, but it’s different.”).

30. Physiological changes include changes in heart rate or the increased production of stress hormones. PARLIAMENTARY OFFICE OF SCI. & TECH., FETAL AWARENESS 3 (1997), available at <http://www.parliament.uk/business/publications/research/briefing-papers/POST-PN-94/fetal-awarenesspost-note94>.

31. Behavioral changes include withdrawal of affected body parts, crying, and facial expressions. *Id.*

32. See K.J.S. Anand & Kenneth D. Craig, *Editorial: New Perspectives on the Definition of Pain*, 67 PAIN 3, 3 (1996) (stating that “[b]ecause self-report may be absent or a faulty source of inference, nonverbal behavioral information is often needed and used for pain assessment”); Am. Acad. of Pediatrics et al., *Prevention and Management of Pain in the Neonate: An Update*, 118 PEDIATRICS 2231, 2231–32 (2006), available at <http://pediatrics.aappublications.org/content/118/5/2231.full.html> (noting long-term adverse effects of pain on development of neonates).

33. FETAL AWARENESS, *supra* note 23, at 5.

34. Anand & Craig, *supra* note 32, at 5; see also Vivette Glover & Nicholas Fisk, *We Don’t Know Better; Better to Err on the Safe Side from Mid-gestation*, 313 BRIT. MED. J. 796, 796 (1996) (arguing that fetal stress responses may be

perfect correspondence between behavioral and physiological indicia and the actual experience of pain, these physicians and scientists note that self-reports of pain and the actual experience of pain also lack a perfect correspondence.³⁵ They argue that the burden of proof is on those who deny the existence of fetal pain in the face of the physical evidence, rather than upon those who seek to respond to the evidence by attempting to alleviate pain.³⁶

*C. Neurological Development*³⁷

Those subscribing to the view that fetal pain should be presumed in cases involving physiological and behavioral responses regularly refer to the development of the fetal nervous system to reinforce their argument. The spinal cord and brain develop within the human embryo's neural tube, which forms within the first two or three weeks of gestation.³⁸ Within the first

the best indices of pain currently available).

35. See Anand & Craig, *supra* note 32, at 3 (describing self-reports as a "faulty source of inference").

36. See Mark Owens, *Pain in Infancy: Conceptual and Methodological Issues*, 20 PAIN 213, 215 (1984)

If the assumption that infants experience pain is correct, then the benefits are measured by a decrease in needless human suffering. The cost of a mistaken assumption of infant pain would be to waste the effort. Costs and benefits come down squarely on the side of assuming that infants do experience pain. The burden of proof should be shifted to those who maintain that infants do not feel pain.

See also Sampsa Vanhatalo & Onno van Nieuwenhuizen, *Fetal Pain?*, 22 BRAIN & DEV. 145, 149 (2000) (stating that the proper response to evidence of fetal response to noxious stimuli is to avoid or treat any possibly noxious stimuli rather than speculate on the possible emotional experiences of pain by the fetus or neonate); John Wyatt, *When Do We Begin to Feel the Pain?*, GUARDIAN, Oct. 24, 1996, at 2

While responsible scientists have a duty to emphasise what they don't know, doctors have a duty of care that should lead them to err on the side of caution. If there is a possibility of lasting harm, we must act in the best interests of our patients even when the evidence is ambiguous. We should, in the words of Glover [a clinical scientist in the psychobiology group at Queen Charlotte's and Chelsea Hospital in London], 'give the foetus the benefit of the doubt,' and extend the use of effective pain relief to surgical procedures before birth.

37. The language and content of Part III.C draw substantially from Collett, *Fetal Pain Legislation*, *supra* note 11, at 165–68.

38. PARLIAMENTARY OFFICE OF SCI. & TECH., *supra* note 30, at 2.

four weeks following conception, the primitive structures of the brain are recognizable.³⁹ The internal structure of the brain continues to develop throughout the pregnancy and during the first year of infancy into a complex structure that regulates many distinct physical processes.⁴⁰

In addition to the brain and spinal cord, the human nervous system consists of an intricate network of peripheral receptors and transmitters.⁴¹ The receptors specifically involved in discerning pain are called nociceptors.⁴² Nociceptors are naked nerve endings that lie free in the skin, with their cell bodies in the dorsal root ganglia.⁴³ They respond to pressure stimuli, thermal stimuli, and chemical stimuli, and transmit their sensory signals through the spinal cord to the brain via cutaneous nerve fibers.⁴⁴ The network of nociceptors and fibers develops in the period from seven to twenty weeks' gestation, beginning in the skin of the face, then to the palms of the hands and soles of the feet, until it covers the entire body.⁴⁵ The fibers link to the central nervous system through a network of synapse-like connections to the cells of the fetal dorsal horn in the spinal cord.⁴⁶ Neural and chemical connections transmit the impulses received by the dorsal horn to the brain.⁴⁷

39. *Id.*

40. *Id.*

41. *Id.*

42. See FETAL AWARENESS, *supra* note 23, at 3–4 (“Nociceptors are sensory nerve terminals found in the skin and internal organs that convert tissue damage into electrical signals. The pattern and strength of these nociceptor signals is the first determining step in generating pain.”).

43. J.A. Rushford, *Pain Perception*, in FETAL & NEONATAL NEUROLOGY & NEUROSURGERY 601, 601 (Malcolm I. Levine & Richard J. Lilford, Sr. eds., 2d ed. 1995).

44. See *id.* (“Two types of dermal nociceptor exist: high threshold mechanoreceptors (HTMs), which respond to pressure and transmit impulses . . . and polymodal receptors (PMNs), which respond to pressure, thermal and chemical stimuli.”).

45. K.J.S. Anand & D.B. Carr, *The Neuroanatomy, Neuophysiology, and Neurochemistry of Pain, Stress and Analgesia in Newborns and Children*, 36 PEDIATRIC CLINICS N. AM. 795, 798 (1989); Roland Brusseau, *Developmental Perspectives: Is the Fetus Conscious?*, 46 INT’L ANESTHESIOLOGY CLINICS 11, 14 (2008); Vanhatalo & Nieuwenhuizen, *supra* note 36, at 146.

46. Rushford, *supra* note 43, at 602.

47. K.J.S. Anand & P.J. McGrath, *The Applied Physiology of Pain*, in PAIN IN NEONATES 39, 40 (1993).

As the brain receives the impulses, they enter the thalamus.⁴⁸ The thalamus registers the impulse and, if it identifies the impulse as one of organic pain, this portion of the brain sends physiological signals to the motor nerves to initiate the body's complex reflexive response to pain.⁴⁹ After interconnection, the thalamus can also transmit the initial impulse to the cortex of the brain, where complex processing, including psychological reaction and directed physical responses, takes place.⁵⁰ Although both the thalamus and cortex are recognizable in the basic brain structure from about six weeks' gestation,⁵¹ they continue to grow in size and internal structure throughout the pregnancy.⁵² The thalamus, however, develops and interconnects with the nervous system much earlier than the cortex.⁵³ By twelve weeks of gestation, the thalamus is mature enough to receive impulses from the sensory network.⁵⁴ Only at or beyond twenty weeks is the interconnection between the thalamus and the cortex sufficiently developed for the cortex to receive the impulses transmitted from the network via the thalamus.⁵⁵

From a neurological development perspective, the key to answering the question of whether fetuses experience pain

48. *Id.*

49. See RICHARD S. SNELL, CLINICAL NEUROANATOMY: A REVIEW WITH QUESTIONS AND EXPLANATIONS 138 (3d ed. 2001) ("A vast amount of sensory information (except smell) converges on the thalamus and is integrated through the interconnections between the nuclei. The resulting information pattern is distributed to other parts of the central nervous system.").

50. *Id.* The cerebral cortex is "[a] sheet of densely packed neuronal cells which form the outer, folded part of the brain associated with higher functions." FETAL AWARENESS, *supra* note 23, at vi.

51. PARLIAMENTARY OFFICE OF SCI. & TECH., *supra* note 30, at 2.

52. *Id.*

53. See *id.* at 1 (stating the fibers of the thalamus "start developing at 17 weeks" yet do not "penetrate the cortical plate [of the cortex] to make permanent connections . . . [until] 22–34 weeks").

54. *Id.* at 2.

55. See MED. RESEARCH COUNCIL, REPORT OF THE MRC EXPERT GROUP ON FETAL PAIN § 3.3 (2001), available at http://www.mrc.ac.uk/Utilities/DocumentRecord/consumption/idcplg?IdcService=GET_FILE&dID=8049&dDocName=MR_C002413&allowInterrupt=1 ("Connections from the thalamus to the cortex begin to form at about 20 weeks gestation . . . and continue to mature along with other cortical connections well into childhood and adolescence.").

depends primarily upon the development and function of the various regions of the brain. Although simple reflex responses are observable even after only seven weeks of gestation, the brain is not yet involved in the process.⁵⁶ Without any brain activity, there can be no perception of pain, according to the current consensus of the medical community.⁵⁷ But medical opinion divides over whether the cortex exclusively controls the human fetus's perception of pain, or whether the thalamus and lower brain stem can generate these perceptions.⁵⁸

According to some physicians, the earlier development of the thalamus and lower brain stem is sufficient for pain perception.⁵⁹ Based on evidence obtained by observing anencephalic and hydranencephalic infants who have no or minimal cortex development, these experts assert that pain perception does not depend upon established connections from the thalamus to the cortex and can exist after the thalamus establishes its connection with the sensory network⁶⁰:

56. PARLIAMENTARY OFFICE OF SCI. & TECH., *supra* note 30, at 1.

57. See COMM'N ON INQUIRY INTO FETAL SENTIENCE, HUMAN SENTIENCE BEFORE BIRTH § 5.2 (1996), *available at* http://www.prolifeinfo.ie/am_cms_media/uploaded/d/0e1625729_docacvpainhumansentience-before-birth.doc ("It is commonly believed that without the cortex, the large mass of brain involved in intricate decision-making, thought and controlled behaviour, there can be no experience of pain.").

58. See *id.* § 5.3

Professor Fitzgerald claimed that to challenge the idea that the cortex was the only region of awareness would challenge "the very basis of our understanding of the brain . . . [.] It is a basic acceptance of the scientific and medical community that the cortex is the site of experience, of understanding, of emotion, of interaction with the outside world The cortex is what makes us into living, reacting, individuals." However, some scientists do challenge this thinking.

(omissions in original).

59. *Id.* § 5.3.2.

60. See *id.* § 5.3.1 ("[T]he evidence from such children challenges the doctrine that the cortex is required for all conscious awareness. The possibility is therefore increasing that the fetus could be aware and have consciousness once lower structures in the brain are formed."). "The thalamus (rather than the sensory cortex) is thought to be the crucial structure for the perception of some types of sensation, especially pain, and the sensory cortex may function to give finer detail to the sensation." STEPHEN G. WAXMAN, CORRELATIVE NEUROANATOMY 125 (24th ed. 2000). This conclusion, although distinguishable, is consistent with the statement of the American Academy of Pediatrics that "[t]he decision [to administer anesthesia to neonates undergoing surgical

Despite total or near-total absence of the cortex, these children [with hydrocephaly] clearly possess discriminative awareness. They distinguish familiar from unfamiliar people and environments and are capable of social interaction, visual orienting, musical preferences, appropriate affective responses, and associative learning. . . .

Multiple lines of evidence thus corroborate that the key mechanism of consciousness or conscious sensory perception are not dependent on cortical activity. Consistent with this evidence, the responses to noxious stimulation of children with hydranencephaly are purposeful, coordinated, and similar to those of intact children.⁶¹

Because the thalamus connection to the sensory network can be established as early as twelve weeks of gestation, some experts would date possible pain perception at twelve to thirteen weeks.⁶²

Other physicians argue that the cortex–thalamus connection is necessary to experience pain.⁶³ Since this connection is established at the earliest between twenty and twenty-four weeks of gestation, these experts assert that only those fetuses of twenty or more weeks of gestation can experience pain.⁶⁴

procedures] should not be based solely on the infant's age or perceived degree of cortical maturity." Am. Acad. of Pediatrics, *Neonatal Anesthesia*, 80 PEDIATRICS 446, 446 (1987), available at <http://www.aap.org/policy/01730.html>.

61. Int'l Ass'n for the Study of Pain, *Fetal Pain?*, 14 PAIN: CLINICAL UPDATES 1, 2 (2006).

62. See COMM'N ON INQUIRY INTO FETAL SENTIENCE, *supra* note 57, § 8.1. See also Mary Sheridan & Roger Highfield, *Growing Pains*, LONDON TELEGRAPH (Oct. 12, 2000, 12:00 AM), <http://www.telegraph.co.uk/science/science-news/4754496/Growing-pains.html> (last visited Jan. 30, 2014) (reporting that 80% of British neuroscientists responding to a survey believed that the fetus should receive pain control after eleven weeks of gestation) (on file with the Washington and Lee Law Review).

63. See Lee et al., *supra* note 23, at 952 ("While the presence of thalamocortical fibers is necessary for pain perception, their mere presence is insufficient—this pathway must also be functional.").

64. *Id.*; see also Derbyshire & Furedi, *supra* note 25, at 912 (stating that the "neuroanatomical system for pain can be considered complete by 26 weeks gestation"); David J. Mellor et al., *The Importance of "Awareness" for Understanding Fetal Pain*, 49 BRAIN RES. REV. 455, 456 (2005) ("[T]he final critical cortico-thalamic connections appear to be present by 24–28 weeks of gestation. This suggests that the fetus could potentially be able to feel pain by the third trimester, at least in a rudimentary fashion." (footnotes omitted)); Richard P. Smith et al., *Pain and Stress in the Human Fetus*, 92 EURO. J. OBSTETRICS & GYNECOLOGY & REPROD. BIOLOGY 161, 161–62 (2001) (noting the neuroanatomical pathways necessary to feel pain begin to develop at 22 weeks,

State legislatures throughout the country have waded into the debate between physicians and scientists over these questions, with thirteen states concluding that there is substantial medical evidence that the unborn can feel pain and that abortion should be strictly limited at and after twenty weeks' gestation.⁶⁵ Courts are now considering whether such legislative conclusions provide an adequate basis for statutory bans on abortions at twenty weeks' gestation and later.⁶⁶ In *Gonzales v. Carhart*,⁶⁷ the majority noted “[m]edical uncertainty does not foreclose the exercise of legislative power in the abortion context any more than it does in other contexts.”⁶⁸ In light of the Supreme Court’s treatment of congressional findings regarding the partial-birth abortion procedure in *Gonzales*, it seems likely the laws will be upheld.⁶⁹

IV. Federal Constitutional Analysis of Abortion Regulation

In *Roe v. Wade*,⁷⁰ the Supreme Court declared that the Constitution contained an implicit right to obtain an abortion.⁷¹ The Court characterized the right as the logical extension of another implied right—the right to use contraception—which was grounded in the implied right to privacy.⁷² In so holding, however, the Court recognized that the abortion decision was unique:

As we have intimated above, it is reasonable and appropriate for a State to decide that at some point in time another interest, that of health of the mother or that of potential human life, becomes significantly involved. The woman’s

and are complete at 26 weeks).

65. See *supra* note 8 and accompanying text (listing the thirteen state statutes).

66. See, e.g., *supra* note 9 and accompanying text (discussing a federal court decision that addressed a state’s fetal pain statute).

67. 550 U.S. 124 (2007).

68. *Id.* at 129.

69. See generally Antony B. Kolenc, *Easing Abortion’s Pain: Can Fetal Pain Legislation Survive the New Judicial Scrutiny of Legislative Fact-Finding?*, 10 TEX. REV. L. & POL. 171 (2005).

70. 410 U.S. 113 (1973).

71. *Id.* at 153.

72. *Id.* at 152.

privacy is no longer sole and any right of privacy she possesses must be measured accordingly.⁷³

Unlike contraception, abortion involves both the mother and “a whole, separate, unique, living human being” that she carries.⁷⁴

Roe established what was to become a “rigid trimester analysis,” permitting virtually no regulation of abortion during the first trimester, and regulations directed only at preserving maternal health in the second trimester.⁷⁵ The state could protect unborn human life by prohibiting abortions only in the third trimester after the child was “viable” or capable of living outside the womb,⁷⁶ and then only if the abortion was not necessary to preserve the life or the health of the mother.⁷⁷

This trimester approach to abortion legislation was criticized by four members of the Court in *Webster v. Reproductive Health Services*⁷⁸:

We think that the doubt cast upon the Missouri statute by these cases is not so much a flaw in the statute as it is a reflection of the fact that the rigid trimester analysis of the course of a pregnancy enunciated in *Roe* has resulted in subsequent cases like *Colautti* and *Akron* making constitutional law in this area a virtual Procrustean bed.⁷⁹

73. *Id.* at 159.

74. *See Planned Parenthood v. Rounds* Minn., N.D., S.D., 530 F.3d 724, 735 (8th Cir. 2006) (en banc) (upholding a South Dakota law requiring that women be informed that abortion ends the “life of a whole, separate, unique, living human being,” and finding that opponents of the definition provided “no evidence to the contrary”).

75. *Webster v. Reprod. Health Servs.*, 492 U.S. 490, 517 (1989) (plurality opinion).

76. A viable fetus is “potentially able to live outside the mother’s womb, albeit with artificial aid,” and presumably capable of “meaningful life outside the mother’s womb.” *Roe v. Wade*, 410 U.S. 113, 160–63 (1973); *see also Colautti v. Franklin*, 439 U.S. 379, 388 (1979) (“Viability is reached when, in the judgment of the attending physician on the particular facts of the case before him, there is a reasonable likelihood of the fetus’ sustained survival outside the womb, with or without artificial support.”). Medical authorities most commonly place viability between twenty-two and twenty-six weeks gestation. MS Pignotti, *The Definition of Human Viability: A Historical Perspective*, 99 ACTA PAEDIATRICA 33, 35 (2010).

77. *Roe*, 410 U.S. at 163–64.

78. 492 U.S. 490 (1989).

79. *Id.* at 517.

The plurality opinion recognized that the State's interest in protecting fetal life existed throughout the pregnancy: "[W]e do not see why the State's interest in protecting potential human life should come into existence only at the point of viability, and that there should therefore be a rigid line allowing state regulation after viability but prohibiting it before viability."⁸⁰

Ultimately the trimester approach was rejected by the Court in *Planned Parenthood of Southeastern Pennsylvania v. Casey*,⁸¹ because the trimester framework "misconceives the nature of the pregnant woman's interest; and in practice it undervalues the State's interest in potential life, as recognized in *Roe*."⁸² The Justices, however, retained fetal viability as a measure of constitutional significance.⁸³

To date, most cases regarding the ability of states to prohibit abortions after viability have focused on the method of determining viability.⁸⁴ The existence of this rule, and the Court's acceptance of the state's compelling interest in protecting viable unborn children, however, does not foreclose the establishment of a separate and independent state interest in preserving the lives of unborn children at the point when they are capable of feeling pain.

V. *Fetal Pain as an Independent State Interest*

The Supreme Court has never been asked whether the state's interest in protecting unborn children who have the capacity to feel pain is sufficiently compelling to support a limited prohibition on abortion. Challenges to Pain-Capable Child Protection Acts require courts to determine whether the capacity

80. *Id.* at 519.

81. 505 U.S. 833, 873 (1992).

82. *Id.* at 873.

83. *See id.* at 879 ("[A] State may not prohibit any woman from making the ultimate decision to terminate her pregnancy before viability.").

84. *See, e.g., Women's Med. Prof'l Corp. v. Voinovich*, 911 F. Supp. 1051, 1077 (S.D. Ohio 1995) ("[I]t appears that the physician *cannot* rely solely on his or her own best clinical judgment in determining whether a fetus is viable; instead, that determination must be objectively reasonable as well, that is, reasonable to other physicians, as well as to the physician making the determination." (footnote omitted)).

to feel pain, independent of fetal viability, is sufficient to sustain a limited prohibition on abortion. While opponents argue vigorously that the pain capacity of the previable unborn should be legally irrelevant,⁸⁵ there are several indications by various members of the Supreme Court that suggest the limited protection afforded to pain-capable unborn children may be constitutional.⁸⁶

Just as the issue of abortion deeply divides the American people, abortion cases divide the Supreme Court, with many of the most significant rulings being plurality opinions. Among the most prominent examples are the plurality opinions in *Webster v. Reproductive Health Services*⁸⁷ and *Planned Parenthood of Southeastern Pennsylvania v. Casey*.⁸⁸ Recent abortion cases such as *Casey* and *Gonzales v. Carhart* suggest a growing willingness of the Court to recognize and weigh multiple state interests in assessing the constitutionality of an abortion regulation.

In *Stenberg v. Carhart*,⁸⁹ Justice Kennedy emphasized that *Casey* held it was “inappropriate for the Judicial Branch to provide an exhaustive list of state interests implicated by abortion” and that “*Casey* is premised on the states having an important constitutional role in defining their interests in the abortion debate.”⁹⁰ In *Gonzales*, Justice Kennedy described the state’s interest in the protection of fetal life as substantial at all points: “*Casey* struck a balance that was central to its holding, and the Court applies *Casey*’s standard here. A central premise of *Casey*’s joint opinion . . . [is] that the government has a

85. Brief for American Colleges of Obstetricians & Gynecologists & American Congress of Obstetricians & Gynecologists as Amici Curiae Supporting Plaintiffs-Appellants at 3–4, *Isaacson v. Horne*, 884 F. Supp. 2d 961 (D. Ariz. 2012), *rev’d*, 716 F.3d 1213 (9th Cir. 2013).

86. *See, e.g.*, *Thornburgh v. Am. Coll. of Obstetricians & Gynecologists*, 476 U.S. 747, 778 (1986) (Stevens, J., concurring) (“[T]he State’s interest in the protection of an embryo . . . increases progressively and dramatically as the organism’s *capacity to feel pains*, to experience pleasure, to survive, and to react to its surroundings increases day by day.”).

87. 492 U.S. 490 (1989).

88. 505 U.S. 833 (1992).

89. 530 U.S. 914 (2000).

90. *Id.* at 961 (Kennedy, J., dissenting).

legitimate, substantial interest in preserving and promoting fetal life”⁹¹

In *Gonzales*, the Court upheld the federal Partial Birth Abortion Ban Act, which made no distinction based on viability: “The Act does apply both previability and postviability because, by common understanding and scientific terminology, a fetus is a living organism while within the womb, whether or not it is viable outside the womb.”⁹² Justice Kennedy, author of the majority opinion, emphasized the State’s interest in protecting the fetus: “*Casey* struck a balance that was central to its holding, and the Court applies *Casey*’s standard here. A central premise of *Casey*’s joint opinion . . . [is] that the government has a legitimate, substantial interest in preserving and promoting fetal life”⁹³

Recognition of a compelling state interest in the protection of pain-capable unborn children does not require the Court to reject a woman’s liberty interest in obtaining an abortion or the balancing framework of *Casey*—it only asks the Court to recognize the legislature’s ability to weigh and rely upon new scientific evidence supporting a strong state interest in regulating abortions at twenty weeks’ gestation. Even former U.S. Supreme Court Justice Stevens, who during his tenure on the Court repeatedly voted to strike down abortion regulations, listed the “organism’s capacity to feel pain” as a ground on the basis of which “the State’s interest in the protection of an embryo . . . increases progressively and dramatically.”⁹⁴ He noted that “[t]he development of a fetus—and pregnancy itself—are not static conditions, and the assertion that the government’s interest is static simply ignores this reality.”⁹⁵

These statements all suggest possible movement away from viability as the sole constitutional marker of legislative power to limit abortions, and toward a more nuanced and balanced

91. *Gonzales v. Carhart*, 550 U.S. 124, 126 (2007).

92. *Id.* at 147.

93. *Id.* at 126.

94. *Thornburgh v. Am. Coll. of Obstetricians & Gynecologists*, 476 U.S. 747, 778 (1986) (Stevens, J., concurring).

95. *Id.* at 778.

approach that would include consideration of the unborn child's pain.

VI. Responding to the Claim that Late Abortions Are Too Few to Be of Concern

Some opponents of Pain-Capable Child Protection Acts argue that the legislation is unnecessary given the small percentage of abortions occurring after the first trimester of pregnancy.⁹⁶ While it is true that the percentage of abortions occurring at or after twenty weeks in the pregnancy is relatively small,⁹⁷ the issue is not insignificant. Twenty-three percent of all abortion providers in the United States offer abortions at twenty weeks.⁹⁸ In 2009, of the 1.21 million abortions performed in the United States, more than 18,000 were performed after twenty-one weeks' gestation.⁹⁹

In any context other than abortion, 18,000 lost lives would generate massive federal and state efforts to prevent these deaths. Two examples illustrate this point. An estimated 15,529 people with an AIDS diagnosis died in 2010.¹⁰⁰ In that same year the federal government spent \$19.6 billion for HIV/AIDS care, housing, prevention, and research.¹⁰¹ For 2014 the President proposed to increase domestic HIV/AIDS funding to \$23.2 billion.¹⁰²

96. Engelman, *supra* note 11, at 311.

97. See GUTTMACHER INST., FACTS ON INDUCED ABORTION IN THE UNITED STATES 2 (2013), http://www.guttmacher.org/pubs/fb_induced_abortion.pdf (reporting that 1.2% of all abortions in 2010 were performed at or after twenty-one weeks gestation).

98. *Id.*

99. See *supra* note 97 and accompanying text (describing the low percentage of abortions performed after twenty-one weeks gestation).

100. *HIV in the United States: At a Glance*, CTR. FOR DISEASE CONTROL & PREVENTION, <http://www.cdc.gov/hiv/statistics/basics/ataglance.html> (last updated Dec. 3, 2013) (last visited Jan. 11, 2013) (on file with the Washington and Lee Law Review).

101. THE HENRY J. KAISER FAMILY FOUND., FACT SHEET: U.S. FEDERAL FUNDING FOR HIV/AIDS: THE PRESIDENT'S FY 2014 BUDGET REQUEST tbl.1 (2013), <http://kaiserfamilyfoundation.files.wordpress.com/2013/05/7029-tables-1-2-federal-funding-for-hiv-aids-the-presidents-fy2014-budget-request.pdf>.

102. *Id.*

Drunk driving laws and government prevention programs provide another example of substantial government efforts to save a small number of lives. According to the National Highway Traffic Safety Administration, 10,322 people were killed in alcohol-impaired-driving crashes in 2012.¹⁰³ Federal and state laws criminalize alcohol-impaired driving and state participation in federal transportation funding is conditioned upon various educational and enforcement efforts to prevent these deaths.¹⁰⁴

Many Americans believe that saving 18,000 unborn children from pain is as important as saving the 15,000 AIDS patients or the 10,000 victims of drunk driving, and well worth the effort to pass, enforce, and defend Pain-Capable Child Protection Acts.¹⁰⁵

VII. Conclusion

If there is a single issue in the abortion debate where common ground could be found, one would hope it might be on the issue of protecting the unborn from the pain of abortion by limiting abortions at twenty weeks or later to cases in which the mother's life or physical health is at stake. Legislatures in thirteen states have enacted laws that say that babies cannot be

103. NAT'L HIGHWAY TRAFFIC SAFETY ADMIN., TRAFFIC SAFETY FACTS: 2012 DATA 1 (2013), <http://www-nrd.nhtsa.dot.gov/Pubs/811870.pdf>.

104. See, e.g., *Drunk Drivers: Congress Gets Behind Breath-Test Ignition Devices*, NATION NOW (Jan. 31, 2012, 3:28 PM), <http://latimesblogs.latimes.com/nationnow/2012/01/bill-to-target-drunk-drivers-gains-support-but-other-battles-lay-ahead-over-next-roads-measure.html> (last visited Jan. 31, 2014) ("A House transportation bill unveiled Tuesday would offer additional highway funds to states that require ignition interlock devices for DUI offenders.") (on file with the Washington and Lee Law Review).

105. See Dave Andrusko, *Pain-Capable Unborn Child Protection Act Remains National Right to Life's Top Legislative Priority*, NAT'L RIGHT TO LIFE NEWS TODAY, <http://www.nationalrighttolifenews.org/news/2014/01/pain-capable-unborn-child-protection-act-remains-national-right-to-lifes-top-legislative-priority/#.UuKAJBb0Ay4> (last updated Jan. 14, 2014) (last visited Jan. 24, 2014).

In a nationwide poll of 1,003 registered voters in March, The Polling Company found that 64% would support a law such as the Pain-Capable Unborn Child Protection Act prohibiting abortion after 20 weeks—when an unborn baby can feel pain—unless the life of the mother is in danger. Only 30% opposed such legislation.

(on file with the Washington and Lee Law Review).

aborted from the point that substantial medical evidence demonstrates the child can feel pain—twenty weeks.¹⁰⁶ Pain-Capable Child Protection Acts are innovative only insofar as the legislation relies upon scientific evidence establishing the unborn child's capacity to feel pain at twenty weeks' gestation and concludes that the acquisition of this capacity makes that child sufficiently like the rest of us to mark a tipping point—a tipping point at which it becomes constitutional for states to restrict abortion to cases involving pregnancies that pose a threat to the mother's life or substantial impairment of a major bodily function. The evidence of the unborn child's pain was not available to the U.S. Supreme Court when it created the constitutional right to abortion in 1973. Both pro-life and pro-choice justices have acknowledged the relevance of pain in adjudicating abortion cases.¹⁰⁷ It is time for the Court to review the evidence and adjust its constitutional jurisprudence to reflect the medical reality of fetal pain and respect the state's right to intervene and protect the child.

106. See *supra* note 8 and accompanying text (listing the thirteen state statutes).

107. See *supra* notes 90–95 and accompanying text (discussing opinions of Justice Kennedy and Justice Stevens).