

OUT OF THE TWILIGHT:

Continuous Caudal Anesthesia and the Modernization of Obstetric Pain Management in America, 1940–1960

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Introduction

For women during the nineteenth and early twentieth centuries, fear of the pain of birth was potent and acute. In the early 1800s, Martha Slayton wrote to her mother-in-law, “It was comforting to know that you had always had a hard time when your babies came. I guess that is the usual experience of mothers. Certainly the suffering is indescribable and I guess not to be comprehended by those who have not passed through it.” Pain was seen as a part of childbirth that must be endured; nevertheless, it still loomed frighteningly as what historian of obstetric anesthesia Jacqueline Wolf calls “the specter of birth.”¹

Throughout history, laboring women, midwives and physicians have sought ways to alleviate the pain of childbirth, at different times turning to herbs, bloodletting, alcohol, emetics, or starvation for help. When ether and chloroform were discovered to diminish pain during surgery in the 1800s, it was not long until these drugs were also applied to obstetrics.² The promise of relief from some of the “indescribable suffering” of birth encouraged women to seek out anesthesia and inspired doctors to use it, even for normal (uncomplicated and non-surgical) birth. Since then, doctors and childbearing women have both worked to mobilize developments in medicine and psychology to reduce the pain of labor and delivery. Over time, changing

¹ Slayton is quoted in Judith Walzer Leavitt, *Brought to Bed: Childbearing in America, 1750 to 1950* (Oxford: Oxford University Press, 1986), 91. For more about how pain was viewed during the nineteenth century, see Margarete Sandelowski, *Pain, Pleasure and American Childbirth: From the Twilight Sleep to the Read Method, 1914-1960* (Westport CT: Greenwood Press, 1984), xiv. Jacqueline H. Wolf provides a brief discussion of why the “specter of birth” loomed so large over women in the Victorian time, suggesting that the fear surrounding birth was socially constructed and not a response to actual experience; see Wolf, “‘Mighty glad to gasp in the gas’: perceptions of pain and the traditional timing of obstetric anesthesia,” *Health* 6 (2002): 369–370, and also Judith Walzer Leavitt, “Under the Shadow of Maternity: American Women’s Responses to Death and Debility Fears in Nineteenth-Century Childbirth,” *Feminist Studies* 12 (Spring 1996): 129-154.

² Robert A. Hingson and Louis M. Hellman, *Anesthesia for Obstetrics* (Philadelphia: J. B. Lippincott Company, 1956), 61–62; Jacqueline H. Wolf, *Deliver Me From Pain: Anesthesia and Birth in America* (Baltimore: Johns Hopkins University Press, 2009), 24–25.

notions of the significance of labor and its associated pain have affected both the image of an ideal birth and the strategies used to achieve it.

Even with advances in obstetrics and anesthesia, until the mid-twentieth century the average American woman entered labor and delivery with the terror that she might not survive to see her child.³ Mothers and doctors thought of amnesia and unconsciousness as ideal strategies to cope with this fear and the pain of birth. In the 1910s, women began to advocate for pain relief techniques such as the German-developed “twilight sleep,” which used a combination of drugs to narcotize mothers during labor and create amnesia of the entire event. Many American doctors, however, questioned the safety of these drugs, fearing that they could harm the mother or fetus.⁴

The period from 1940 to 1960 was critical in the evolution of obstetric anesthesia. As mothers began to deliver the postwar Baby Boom generation, there were two significant developments in pain relief that represented a new type of birth: the invention of continuous caudal anesthesia (which would evolve into the epidural) and the introduction of “natural childbirth” and prenatal training. In sharp contrast to the anesthetic methods of the previous hundred years, these new techniques allowed mothers to remain fully conscious throughout labor and delivery, able to experience and participate in the births of their children. Examining the pain relief strategies developed at this time can help us understand contemporary beliefs about pain, motherhood and doctor-patient relationships.

³ Leavitt, *Brought to Bed*, 14. The maternal mortality rate in America remained high (around 600 in 100,000 births) through the early 1900s; it was not until the 1937 advent of sulfa drugs to fight infection that it began to drop dramatically. See Michael R. Haines, “Fetal death ratio, neonatal mortality rate, infant mortality rate, and maternal mortality rate, by race: 1850–1998,” Table Ab912-927 in *Historical Statistics of the United States, Earliest Times to the Present: Millennial Edition*, ed. Susan B. Carter, et. al. (New York: Cambridge University Press, 2006), <http://dx.doi.org/10.1017/ISBN-9780511132971.Ab912-1137>

⁴ Judith Walzer Leavitt, “Birthing and Anesthesia: The Debate Over Twilight Sleep” *Signs* 6 (Autumn, 1980): 150–153; Wolf, *Deliver Me From Pain*, 102–103.

Continuous caudal anesthesia—which was eventually supplanted by its close cousin, lumbar epidural anesthesia, also known as an epidural—emphasized consciousness alongside pain relief in birth, which appealed both to mothers eager to hear their babies’ first cries and to obstetricians who found conscious patients more cooperative. Early natural childbirth in the 1940s and 1950s, notably the Dick-Read method of training to reduce fear, looked to psychology instead of pharmacology to render a woman similarly conscious and cooperative. Although their strategies differed, both of these pain management techniques aimed to create a birth experience that was comfortable, cooperative and conscious.

There is a significant body of literature on the history of childbirth and obstetric anesthesia. Jacqueline Wolf, Margarete Sandelowski and Donald Caton have all explored management of obstetric pain, and Judith Walzer Leavitt and Richard C. Wertz and Dorothy Wertz’s comprehensive histories of American childbirth also include detailed examinations of anesthesia. The literature on the introduction and growth of continuous caudal anesthesia, however, is small—discussion is limited to about a paragraph in each of these books, if it is described at all.⁵ Historical coverage of Grantly Dick-Read and his efforts to pioneer an early form of “natural childbirth” is much more extensive.⁶ But no historians have examined natural birth in direct relationship to continuous caudal anesthesia; indeed, the two are typically treated separately if not contrasted. This essay will attempt to demonstrate that caudal anesthesia and

⁵ See Wolf, *Deliver Me From Pain*, 89–90; Sandelowski, *Pain, Pleasure and American Childbirth*, 96; Donald Caton, *What A Blessing She Had Chloroform: The Medical and Social Response to the Pain of Childbirth from 1800 to the Present* (New Haven: Yale University Press, 1999), 169; Leavitt, *Brought to Bed*—chapter 5 covers anesthesia in birth up until about 1920 but does not mention caudal or epidural anesthesia; Richard W. Wertz and Dorothy C. Wertz, *Lying-In: A History of Childbirth in America* (New York: The Free Press, 1977), 181.

⁶ See, for example: Wolf, *Deliver Me From Pain*, 151–163; Sandelowski, *Pain, Pleasure and American Childbirth*, chapters 4–5; Caton, *What A Blessing She Had Chloroform*, chapter 10; Wertz and Wertz, *Lying-In*, 183–198; Margot Edwards and Mary Waldorf, *Reclaiming Birth: History and Heroines of American Childbirth Reform* (Trumansburg, NY: The Crossing Press, 1984), chapters 1–2.

early natural childbirth had much in common, both in the way they responded to the anesthetic history that had come before and in the way they have been so thoroughly incorporated into modern obstetric anesthesia practice.

The first section of this essay covers almost a century of the history of obstetric anesthesia, from the introduction of ether in 1847 to the chaotic and confused state of anesthesia at the dawn of the 1940s. The second section examines the introduction of continuous caudal anesthesia and its evolution into lumbar epidural anesthesia, looking both to the medical and scientific advances that inspired its creation and the responses of doctors, women and the press. The third section focuses on Grantly Dick-Read and Yale obstetrician Herbert Thoms and their attempts to institutionalize a system of training for childbirth based on Dick-Read's ideas that childbirth was natural, not pathological, and its pain could and should be managed through education and relaxation. This section also covers contemporary debates about the true nature of labor pain. The fourth section looks at the responses of women and doctors to these new forms of pain management to see what they suggested about the experience of birth, the ideal doctor-patient relationship, and what it meant to be a mother in the 1940s and 1950s. The final section traces the developments of this era up to the present day and charts the current landscape of obstetric anesthesia to understand how we talk about the pain of childbirth today and what that means for modern mothers.

Harnessing Science to the Stork: Obstetric Anesthesia before 1940

On April 7, 1853, Queen Victoria delivered her eighth child, Prince Leopold, under the anesthetizing influence of chloroform. Dr. John Snow, a prominent anesthetist, administered the drug via inhalation in fifteen-minute intervals, enough to provide pain relief without inducing total unconsciousness. The Queen, pleased with the results, insisted on enlisting Snow again for the birth of her next child, Princess Beatrice—despite protests from both religious and medical authorities.⁷ This was not the first application of inhalation anesthesia for childbirth, but it was one of the best-known uses of “intermittent inhalation anesthesia,” or “anesthésie à la reine” (“The Queen’s anesthesia”) as it came to be known. Queen Victoria’s successful drug-assisted labor helped to popularize chloroform for obstetric pain relief.⁸

One of the leading advocates for inhalation anesthesia in childbirth during this era was Dr. James Simpson, a professor of medicine and midwifery in Edinburgh. In 1847, Simpson had been the first to use anesthesia during a birth when he administered ether to a patient who had a small pelvis. Content that labor and delivery progressed normally under the anesthetic, Simpson continued to use ether in a series of normal births. Ultimately dissatisfied with ether—citing its common side effects of hysteria, vomiting and lethargy—Simpson eventually grew to prefer chloroform, but both drugs quickly became popular treatments for the pains of labor. In the United States, Henry Wadsworth Longfellow’s wife Fanny Appleton Longfellow was the first woman in the country to use inhalation anesthesia for childbirth when she delivered her third

⁷ Herbert Thoms, “Anesthésie à la Reine: A Chapter in the History of Anesthesia,” *American Journal of Obstetrics and Gynecology* 40 (August 1940): 340–346; Christopher Hibbert, *Queen Victoria: A Personal History* (Cambridge MA: Da Capo Press, 2000), 216–217. The Anglican Church protested the Queen’s use of anesthesia on the grounds that it was against the Biblical command, “in sorrow thou shalt bring forth.” The medical community, notably *The Lancet*, argued that chloroform anesthesia was unsafe and should not be used except in extreme circumstances. See Hibbert, *Queen Victoria*, 217n.

⁸ Wolf, *Deliver Me From Pain*, 25.

child under the influence of ether dispensed by Nathan Cooley Keep, a Boston physician. Dr. Walter Channing, an influential advocate for obstetric anesthesia in the United States at this time, also was an ether devotee.⁹ The use of both ether and chloroform expanded through the second half of the 1800s, but as Judith Walzer Leavitt notes there was little standardization in practice or in physicians' acceptance of the anesthesia.¹⁰ Some physicians strongly resisted using the drugs, others reluctantly agreed to their use in the face of patient demand, and still others actively advocated for the use of anesthetics.¹¹

Many of these debates arose over disagreements about the necessity of pain relief in labor. Doctors such as Simpson and Channing who advocated anesthesia were typically driven by the belief that childbirth was inherently pathological, painful, and harrowing. Physicians who opposed the use of obstetric anesthesia, on the other hand, were more likely to believe that labor was natural and enduring.¹² For example, Charles D. Meigs, a Philadelphia doctor who was an outspoken opponent of anesthetics in childbirth, wrote in 1848 that, "a labour-pain [is] a most desirable, salutary, and conservative manifestation of life-force."¹³ Martin Pernick, in his book *Calculus of Suffering*, suggests that many physicians believed pain was relative to social class and status: women of lower classes, thought to be more "primitive" and inured to pain, were not

⁹ B. P. Watson, "Commemoration of the Centennial of the Introduction of Anesthesia in Obstetrics by Sir James Y. Simpson," *American Journal of Obstetrics and Gynecology* 56 (Aug. 1948): 207; Wolf, *Deliver Me From Pain*, 24.

¹⁰ Leavitt, *Brought to Bed*, 119. Leavitt also describes how, within the United States, there did not seem to be any particular regional pattern in the use of either ether or chloroform. Instead, physicians were likely influenced by the personal choices of their teachers or mentors; see 244n28.

¹¹ Leavitt, *Brought to Bed*, 117.

¹² Wolf, *Deliver Me From Pain*, 24–25.

¹³ Charles D. Meigs quoted in Leavitt, *Brought to Bed*, 117.

believed to suffer as acutely as their more “sensitive” upper-class sisters, and pain relief was doled out accordingly.¹⁴

Even when pain relief was provided, as Wolf argues, it is unclear whether the drugs did much to ease the pain of labor. The application of ether and chloroform anesthesia during the late nineteenth and early twentieth centuries, according to Wolf, represented doctors’ fundamentally flawed perceptions of labor pain and was unlikely to provide adequate relief. Most doctors agreed that it was unsafe to use anesthesia for very long during labor, and so, they supposed, it would be best to limit it to what they identified as the most painful part of labor. Surveys of women who have delivered children without anesthesia generally show that the most painful period of labor is the end of the first stage, known as transition, wherein the cervix completes dilation and the baby begins to descend into the birth canal. The next stage of labor, when the baby is delivered, however, *appears* more painful to the observer because of the extreme effort exerted by the birthing woman. This inaccurate perception on the doctors’ part led them to let women suffer through the painful contractions involved in the first stage of labor and transition, administering anesthesia only at the moment of delivery.¹⁵ The use of inhalation anesthesia continued to increase, however, as mothers believed they had been spared the worst and the notion spread that the pain of childbirth could be alleviated. Although it is difficult to determine the exact extent of its use, one study done in Wisconsin at the turn of the twentieth century found that chloroform was administered during second-stage labor in half of 972 consecutive births.¹⁶

¹⁴ Martin Pernick, *A Calculus of Suffering: Pain, Professionalism and Anesthesia in Nineteenth Century America* (New York: Columbia University Press, 1985): 151–152.

¹⁵ Wolf, ““Mighty Glad to Gasp in the Gas,”” 367–368, 370–372.

¹⁶ Leavitt, “Birthing and Anesthesia,” 148.

During this time, the experience of birth itself was changing in other significant ways. The number of babies born in hospitals versus those born at home began to grow rapidly. In 1900, less than 5% of births occurred in hospitals, compared to about 50% by 1939. These numbers are even higher for urban women, who delivered 75% of their babies in hospitals by the late 1930s.¹⁷ A major effect of hospitalization was a transition from female-managed births to births that were primarily controlled by men. In the home, birth had traditionally been overseen by female family members, friends, and midwives; until the nineteenth century, it was extremely rare for a man to enter the birthing room at all. During the nineteenth century, however, women slowly began to ask for male physicians to attend their births as “birth attendants,” believing that the doctors would provide a better outcome, even though it meant breaking the traditional gender rules of labor. By 1900, physician-attended births accounted for the majority of deliveries in America. Still, as Leavitt explains, “Until women moved into the hospital to deliver their babies in the twentieth century ... female-centered activities dominated most American births, whether or not they were attended by male physicians.”¹⁸ Hospitalization of birth continued a trend toward placing more responsibility and power over birth into the hands of men.¹⁹

Several factors accounted for this trend toward hospitalized births, from the safety and comfort promised by hospitals to the invention of the automobile that allowed rural women to get to hospitals more easily.²⁰ The promise of pain relief, too, was a significant driving force. While midwives and other lay birth attendants in the early twentieth century might have offered

¹⁷ Wertz and Wertz, *Lying-In*, 133.

¹⁸ See Leavitt, *Brought to Bed*, 36 & 87.

¹⁹ Wolf, *Deliver Me From Pain*, 110.

²⁰ Wertz and Wertz, *Lying-In*, 132–135.

home remedies like herbal tea or hard liquor to soothe labor pains, they were rarely formally trained and did not have access to specialized drugs or equipment.²¹ Physicians, on the other hand, could promise medically-assisted relief from the feared agony of delivery, and they could do so in the perceived safety of hospitals. Although economists Melissa Thomasson and Jaret Treber demonstrate through a statistical analysis of U.S. maternal mortality data that the spike in hospitalized births initially only had a very small effect on the maternal mortality rate, they agree that during the first decades of the twentieth century physicians extolled the safety of hospitals and “there does not appear to have been much evidence available at the time that gave women any reason to doubt their physician’s claims.”²² To women frightened of the pain and danger of birth, hospitals were seen, however inaccurately, as uniquely able to provide the kind of sanitary, safe, and specialized care required for a successful and painless childbirth.

Class was another substantial determining factor in whether birth occurred at home or in the hospital. Poor, black and immigrant women were far more likely to give birth at home through the first half of the twentieth century, with a midwife in attendance and little to no pharmaceutical pain relief. Middle and upper-class women could elect to give birth in a hospital in the presence of a physician. Wealthier women, therefore, had far greater access to obstetric anesthesia during this period.²³

One anesthetic technique uniquely available in hospitals became popular with upper and middle-class women in the United States during the early 1900s. Around the turn of the century,

²¹ Judy Barrett Litoff, “An Enduring Tradition: American Midwives in the Twentieth Century,” in *The Great American Midwife Debate: A Sourcebook on Its Modern Origins*, Judy Barrett Litoff, ed. (New York: Greenwood Press, 1986), 4.

²² Melissa A. Thomasson and Jaret Treber, “From home to hospital: The evolution of childbirth in the United States, 1928–1940,” *Explorations in Economic History* 45 (2008): 76–79, 81–84, 90–93 (quote on 93).

²³ Leavitt, “Birthing and Anesthesia,” 148; Litoff, “An Enduring Tradition,” 4.

doctors in Germany had begun experimenting with a new obstetric anesthetic technique they called “Dämmerschlaf,” or “twilight sleep.” The method involved a hypodermic injection of two drugs: morphine, a narcotic, and scopolamine, a sedative that also causes amnesia. The combination of these drugs lightened a woman’s pain during childbirth, but more importantly completely erased her memory of the event. Unlike inhalation anesthesia, twilight sleep was administered early in labor and thus provided pain relief and amnesia for a longer duration. A woman giving birth under twilight sleep slipped into unconsciousness as labor began, and awoke hours later a mother, feeling—advocates promised—refreshed, alert, and serene.²⁴

Word of twilight sleep spread rapidly throughout Europe. In June 1914, *McClure’s Magazine* introduced twilight sleep to American women in an article calling it “a new and painless method of childbirth.” The article, written by two laywomen, included testimonials from mothers who had experienced twilight sleep and from the German doctors who pioneered the method, all claiming that it was both safe and effective.²⁵ “No article ever published in *McClure’s*,” the magazine reported a few months later, “attracted more attention than ‘Painless Childbirth’ in the June issue.”²⁶ According to the authors, twilight sleep was intended primarily for affluent, educated women—the kinds of women who were believed to have more delicate constitutions and, consequently, greater need for pain relief. “The modern woman, on whose nervous system nowadays quite other demands are made than was formerly the case, responds to the stimulus of severe pain more rapidly with nervous exhaustion and paralysis of the will to

²⁴ Accounts of the introduction of twilight sleep can be found in most major works on the history of childbirth. See, for example, Jacqueline Wolf, *Deliver Me From Pain*, 48–49; Caton, *What a Blessing She Had Chloroform*, 133–135; Wertz and Wertz, *Lying-In*, 150; Leavitt, “Birthing and Anesthesia,” 147–164.

²⁵ Marguerite Tracy and Constance Leupp, “Painless Childbirth,” *McClure’s Magazine*, June 1914, 37.

²⁶ Mary Boyd and Marguerite Tracy, “More About Painless Childbirth,” *McClure’s Magazine*, October 1914, 56.

carry the labor to a conclusion,” they wrote. “The sensitiveness of those who carry on hard mental work is much greater than that of those who earn their living by manual labor.”²⁷ Twilight sleep, then, was deemed necessary to help “sensitive” women avoid nervous breakdowns during labor.

Pain relief began to provide an avenue for women to exercise their decision-making and reclaim some control over birth as they started to actively ask for the type of anesthesia they wanted. Leavitt argues that despite the way twilight sleep required women to relinquish control over their bodies, the movement in support of the anesthetic method was still primarily a feminist movement. “Feminist women,” she explains, “wanted the parturient, not the doctor or attendant, to choose what kind of delivery she would have.”²⁸ In a follow-up to the initial *McClure’s* article, printed in October 1914, the authors criticized doctors for withholding twilight sleep in the U.S., and admonished, “Women alone can bring ... [twilight sleep] into American obstetrical practice.”²⁹ Women eventually were successful in establishing twilight sleep in the U.S.—by May of the following year, a national survey conducted by *McClure’s* reported that the practice “gains steadily.”³⁰

Although the activism of campaigning for these particular anesthetic techniques is widely considered, at least in some form, an early feminist movement, it is less clear whether the resulting pain-relieving procedures and techniques could be considered feminist. Leavitt notes, “Ironically, by encouraging women to go to sleep during their deliveries, the twilight sleep

²⁷ Tracy and Leupp, “Painless Childbirth,” 43.

²⁸ Leavitt, “Birthing and Anesthesia,” 148.

²⁹ Boyd and Tracy, “More About Painless Childbirth,” 57; Leavitt, “Birthing and Anesthesia,” 152–153.

³⁰ Survey reported in the *New York Times*, May 10, 1915, quoted in Leavitt, “Birthing and Anesthesia,” 159.

movement helped to distance women from their bodies.”³¹ Additionally, despite many reports from mothers describing the ease and serenity of their births under twilight sleep, in clinical practice the drugs used often had serious drawbacks. Although the woman in labor did not remember her childbirth, her body still experienced it. Since the drugs decreased the woman’s coordination, if not properly supervised she could deliriously thrash around, interfere with delivery, or injure herself. To protect women laboring under twilight sleep, doctors created devices to restrain and control them. For example, Dr. Bertha Van Hoosen, a leading advocate of twilight sleep, used a cage-like bed covered in white sheets to constrain the mother to her bed and provide a quiet, nonstimulating environment. “[Twilight sleep] is a sleep so light and susceptible to outside impressions,” the initial *McClure’s* article explained, “that semi-darkness and quiet are required to make it entirely satisfactory.”³² Van Hoosen also advocated the use of a shirt with one circular sleeve, almost like a loosened straitjacket, to prevent mothers from scratching themselves or the doctors and nurses tending them.³³

Many American doctors were not persuaded by the twilight sleep advocates. They worried about the dangers of the drugs involved, and refused to agree to the demands of laywomen. In October 1914, Illinois physician J. H. Salisbury wrote a letter to the *Journal of the American Medical Association* protesting the “fallacious arguments and pictorial intimations” that permeated the campaign for twilight sleep, and condemning the medical community for failing to adequately address these dangers. “Is it not time,” he wrote, “that this misleading popular exploitation of a practically discarded method be met by clear statements from the

³¹ Leavitt, “Birthing and Anesthesia,” 164.

³² Tracy and Leupp, “Painless Childbirth,” 39.

³³ Leavitt, “Birthing and Anesthesia,” 149–150.

medical profession through the press?”³⁴ The campaign for twilight sleep, however, was already waning in the face of mounting safety concerns about the effects of scopolamine on mothers and fetuses. Finally, in August 1915, Francis X. Carmody, an outspoken advocate of twilight sleep, died in childbirth. Although her husband and doctors maintained that her death was not caused by the anesthesia, her death spooked other twilight sleep activists and injured the cause.³⁵

Twilight sleep, however, did not disappear altogether. Although its use gradually diminished, anesthetic and amnestic techniques based on its basic properties—typically combining scopolamine with another form of analgesia—persisted well into the 1960s.³⁶ Twilight sleep also remained a resonant idea in popular culture. In 1927, Edith Wharton published a novel titled *Twilight Sleep*, about an elite New York City family. Her image of birth under twilight sleep, described as “drift[ing] into motherhood ... lightly and unperceivingly,” which appears in the early pages of the book, sets the tone for the rest of the novel in which the characters drift through life “lightly and unperceivingly” with little attention to anything beyond the immediate gratification of material goods.³⁷

Although the vociferous campaign for twilight sleep diminished into the midcentury, the notion that scientific advances would provide laboring women with safe, high-tech drugs to control their pain persisted, especially among the growing number of women entering hospitals to give birth. An article in *Parents* magazine in 1940 provides an illuminating view of the state of childbirth at the time. The article, written by Constance J. Foster and “read and approved by a

³⁴ Leavitt, “Birthing and Anesthesia,” 157; J. H. Salisbury, “The Twilight Sleep in Obstetrics,” Letter to the Editor, *Journal of the American Medical Association* 62 (October 17, 1914), 1410.

³⁵ Leavitt, “Birthing and Anesthesia,” 163.

³⁶ *Ibid.*, 163.

³⁷ Edith Wharton, *Twilight Sleep* (New York: D. Appleton and Company, 1927), quote on 14.

well-known gynecologist and an outstanding obstetrician,” aimed to provide readers with an survey of recent advances in science and medicine intended to improve the ease and safety of birth.³⁸ She outlines the four methods of pain relief that were most commonly used during births in 1940, which differed in the drugs and the exact timing of the woman’s period of unconsciousness, but which, like twilight sleep, aimed to provide both analgesia (a reduction in pain) and amnesia (a loss of memory). A quote from one unnamed mother, placed next to two photos of peaceful, healthy babies, is emblematic of ideal childbirth in 1940: “I just went to sleep ... and when I woke up my baby was already four hours old!” Foster lays credit for these “pleasant” birth experiences in the hands of science, which she says has “simplified pregnancy” and made labor endurable.³⁹

Foster mentions twilight sleep in the article but notes that it has fallen out of favor.⁴⁰ One current popular method of pain management she describes in detail is “ether and oil,” developed by James T. Gwathmey in 1923, which involved combining an ether and oil enema with a hypodermic injection of morphine and magnesium sulfate, and (in later years) paraldehyde, a soporific that was thought to increase the effectiveness of the other drugs. And that was just for early labor: once the patient was near delivery, ether or gas was substituted.⁴¹ Foster enthusiastically describes her own experience with this method: “I had been sleeping soundly for four hours [during labor] and felt beautifully rested and refreshed for what was still ahead of me

³⁸ Constance J. Foster, “New Techniques in Childbirth,” *Parents’ Magazine*, May 1940, 24–25, 41, 83–84.

³⁹ *Ibid.*, 41.

⁴⁰ *Ibid.*, 41. Leavitt agrees, noting that the twilight sleep movement “succeeded in making the concept of painless childbirth more acceptable and in adding scopolamine to the obstetric pharmacopoeia.” See Leavitt, “Birthing and Anesthesia,” 163.

⁴¹ Foster, “New Techniques in Childbirth,” 41.

... After that I went soaring off blessedly into space whenever a pain threatened to destroy my comfort.”⁴²

The other anesthetic methods described included the use of barbiturates (which Foster lauds “in some cases seem literally to work miracles,” but in other cases had a reverse effect and caused the parturient to become restless and agitated), a combination of ether and barbituric salts, and the sedative paraldehyde.⁴³ All of these methods combined anesthetic and amnestic effects, reinforcing the notion that in 1940 the ideal birth was, essentially, no lasting experience of birth at all. The “perfect” laboring mother instead was put into a relaxing, dreamy sleep, and awakened several hours later with a healthy child and no memory of any pain or fear she might have felt.

Around this time, however, clinical evidence against morphine and other narcotics used during childbirth was mounting. In the 1930s and continuing into the 1940s, the *American Journal of Obstetrics and Gynecology* published several articles and editorials debating whether the use of analgesic drugs increased the likelihood of babies born with repressed respiratory function. Dr. Yandell Henderson, in a March 1939 editorial, noted gravely that narcotics seemed to affect the respiration of the fetus far more than that of the mother, explaining, “Of [babies] born of narcotized mothers, from 30 to 60 per cent, according to the particular narcotics employed, exhibit a more or less prolonged period of apnea [not breathing].” He recommended that narcotics, if necessary, only be used briefly and only in early stages of labor.⁴⁴ But not all doctors agreed. William F. Mengert in 1942 identified the risks of morphine as an analgesic but

⁴² Ibid., 83–84.

⁴³ Ibid., 41, 83.

⁴⁴ Yandell Henderson, “Narcotic Asphyxia in the Newborn,” *American Journal of Obstetrics and Gynecology* 37 (March 1939): 521–522.

still supported its use—“although its limitations should be recognized.”⁴⁵ In 1941, a group of doctors in Michigan studied 975 consecutive deliveries and concluded that ether “definitely decreases the respiratory response of the newborn,” but also determined that “when properly supervised and in the hands of those familiar with their use, analgesics [including scopolamine and narcotics] per se do not increase the incidence of asphyxia.”⁴⁶ Although in clinical practice many doctors continued using narcotics as well as scopolamine well into the 1960s, increasing uncertainty surrounding their potential ill effects inspired obstetricians to seek less dangerous methods of pain relief.⁴⁷

Consequently, as the 1940s began, the future of obstetric anesthesia was uncertain. Despite women who waxed rhapsodic about the easy, comfortable labors they experienced under sedatives like twilight sleep or barbiturates, growing doubts about the safety of these methods were a cause for concern for women and their physicians alike. Nevertheless, women’s fear of childbirth and demand for anesthesia remained high, and the successes in pain relief that *had* been achieved perpetuated an optimism among both doctors and women that painless childbirth truly was a possibility. Women remembered the promise of twilight sleep, and doctors remembered the power of women’s decision-making, prompting them to continue their efforts to discover a form of pain-relief that would be both safe and effective.

At this time, most doctors believed in the power of science to conquer pain, and their energy was focused on experimenting with new drugs and methods of drug administration. The

⁴⁵ William F. Mengert, “Morphine Sulfate as an Obstetric Analgesic,” *American Journal of Obstetrics and Gynecology* 44 (Nov. 1942): 895.

⁴⁶ Harold Henderson, E. Bruce Foster and L. S. Eno, “The Relative Effect of Analgesia and Anesthesia in the Production of Asphyxia Neonatorum,” *American Journal of Obstetrics and Gynecology* 41 (April 1941): 604.

⁴⁷ Leavitt, “Birthing and Anesthesia,” 163.

few voices of dissent—notably Dr. Grantly Dick-Read, a British obstetrician who advocated education and training instead of extensive anesthetization as a way to reduce a woman’s fear, and thus pain, during childbirth—sounded thinly against the clamorous demand for newer, better drugs. In *Parents* magazine, Foster lauded the progress that had already been made through medicine, explaining, “Having a baby is much worse in anticipation than realization, now that science has been harnessed up to the stork.”⁴⁸

“Dramatically Painless:” The Introduction of Continuous Caudal Anesthesia

The development of antibacterial sulfanamide or “sulfa” drugs in the late 1930s remarkably and permanently altered the experience of giving birth for women in America. In 1937, sulfa drugs were introduced into obstetrics to treat blood infections caused by birth, typically referred to as “childbed” or “puerperal” fever. Until this point, infection and its resulting fever had accounted for 35–55% of maternal deaths (with 20–30% caused by eclampsia, 10% by hemorrhage, and the remainder by other causes). Sulfa drugs, and later antibiotics—alongside concurrent advancements in hospital sanitation and safety—led to a steep drop in maternal mortality.⁴⁹ Before 1935, the maternal mortality rate hovered at around 600 deaths per 100,000 births. Between 1935 and 1945, however, the rate dropped from 582.1 deaths per 100,000 births to 207.2 deaths; by 1955, the rate was 47 deaths, and, as a 1952 article in the *Washington Post* assured mothers, “All told, it’s much more dangerous to go driving than it is to have a baby.”⁵⁰ (See Figure 1). By the mid-1940s, therefore, the “specter of birth” described by

⁴⁸ Foster, “New Techniques in Childbirth,” 41, 83.

⁴⁹ Thomasson and Treber, “From home to hospital,” 86, 86n12, 90.

⁵⁰ Haines, “Fetal death ratio, neonatal mortality rate, infant mortality rate, and maternal mortality rate, by race: 1850–1998;” Joan Younger, “More Danger Driving Than in Giving Birth,” *The Washington Post*, May 29, 1952.

Wolf did not hang quite so ominously over the heads of pregnant women.⁵¹ Declining mortality and advances in anesthetics led to a new generation of women who saw childbirth, as one 1956 obstetric anesthesia textbook put it, as “a natural life experience in which she desires to partake actively.”⁵² The desires and anxieties of women began to shift—instead of looking to anesthesia to eliminate the experience of birth, as through twilight sleep, women increasingly wanted to be conscious and aware throughout their labor. This desire was reflected in new methods of pain management developed during the 1940s and 1950s.

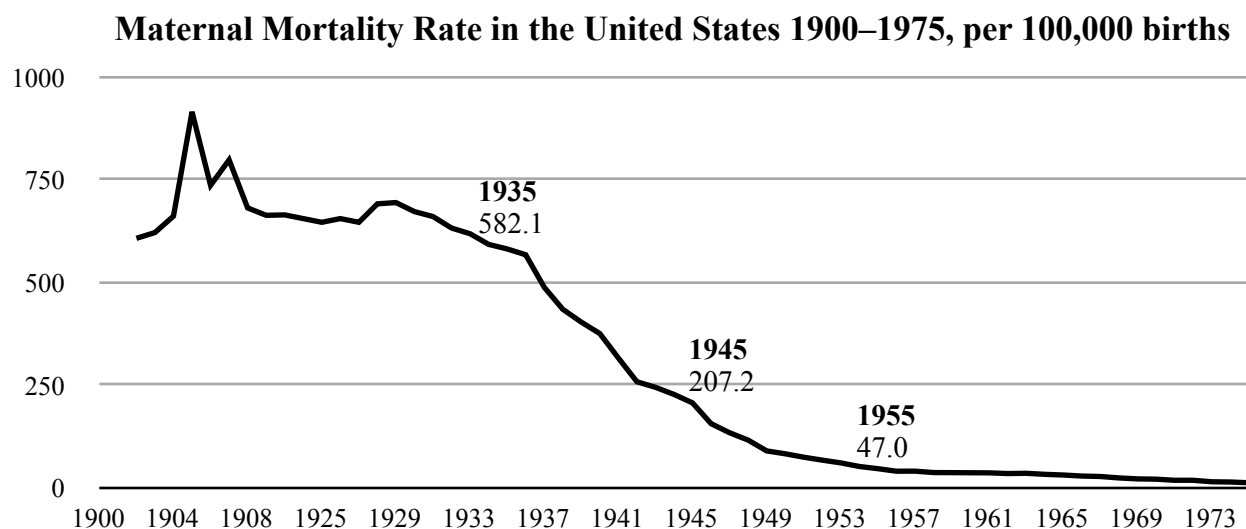


FIGURE 1: The maternal mortality rate in the United States, 1900–1975, in deaths per 100,000 births.

Data from Michael R. Haines, “Fetal death ratio, neonatal mortality rate, infant mortality rate, and maternal mortality rate, by race: 1850–1998.” Table Ab912–927 in *Historical Statistics of the United States, Earliest Times to the Present: Millennial Edition*, ed. Susan B. Carter, Scott Sigmund Gartner, Michael R. Haines, Alan L. Olmstead, Richard Sutch, and Gavin Wright. New York: Cambridge University Press, 2006. <http://dx.doi.org/10.1017/ISBN-9780511132971.Ab912-1137>

⁵¹ Wolf, “‘Mighty Glad to Gasp in the Gas,’” 369.

⁵² Hingson and Hellman, *Anesthesia for Obstetrics*, 4.

One new type of anesthesia that doctors began actively investigating at this time was local anatomical block anesthesia—injecting a local anesthetic into the spinal cord or into the epidural (also known as peridural or extradural) space, which surrounds the spinal cord, to block the nerves that lead to the uterus, vagina, and perineum, creating pain relief without a loss of consciousness. Spinal anesthesia, which had been first used for obstetrics by a Swiss doctor in 1900, was moderately well-known in the United States by the 1920s and 1930s. During the first few decades of the twentieth century, it was typically administered through a single injection during the second stage of labor, when it would facilitate delivery by episiotomy and forceps. High rates of complications and uncomfortable side effects (notably, terrible headaches after delivery), however, prevented the spinal application from ever becoming widely popular.⁵³

Epidural anesthesia, on the other hand, slowly gained favor among anesthesiologists and obstetricians. In the 1920s and 1930s, a number of reports were published supporting the use of single-injection caudal anesthesia (injection into the epidural space via the sacral canal, in the tailbone) for delivery.⁵⁴ In January 1940, William T. Lemmon, a Philadelphia surgeon, published an article in *Annals of Surgery* describing the use of *continuous* spinal anesthesia, a modification of the traditional spinal method, which supplied small amounts of anesthesia into the spinal cord over a long period of time.⁵⁵ Although continuous spinal anesthesia had the same drawbacks as

⁵³ Hingson and Hellman, *Anesthesia for Obstetrics*; John J. Bonica, *Principles and Practice of Obstetric Anesthesia* (Philadelphia: F. A. Davis Company, 1967), 539; Donald Caton, “A Sesquicentennial Celebration (1847–1997),” Society of Obstetric Anesthesia and Perinatology, 1997, <http://soap.org/pdfs/sesquicentennial-celebration.pdf>; Donna Stampone, “The History of Obstetric Anesthesia,” *Journal of Perinatal and Neonatal Nursing* 4 (1990): 7–8; E. L. Griffin and R. C. Benson, “Gynecologic Surgery Under Local Anesthesia,” *American Journal of Obstetrics and Gynecology* 42 (Nov. 1941), 862.

⁵⁴ Bonica, *Principles and Practice of Obstetric Anesthesia*, 574.

⁵⁵ William T. Lemmon, “A Method For Continuous Spinal Anesthesia,” *Annals of Surgery* 111 (Jan. 1940): 141–144.

single-injection spinal, Lemmon's developments were essential in this new generation of obstetric pain management.

In early 1942, physicians Robert A. Hingson and Waldo B. Edwards began experimenting with a new form of obstetric anesthesia at the U.S. Marine Hospital in Staten Island, New York, where they cared for the young wives of Coast Guard personnel. Inspired by recent successes with single-injection epidural anesthesia, but frustrated by the method's short duration (typically 40–90 minutes), Hingson and Edwards set out to establish an anesthetic procedure that would “relieve the parturient of that distressing and exhausting experience throughout the early stages in labor.” Drawing on Lemmon's continuous spinal technique, and using a flexible needle developed in 1940 which could be left in place for long periods of time, the doctors introduced small doses of metycaine (an anesthetic) into the sacral canal to provide pain relief throughout labor, delivery, and (if necessary) repair of the episiotomy. Early results were promising: in September of 1942, Hingson and Edwards published a paper in the *American Journal of Surgery* describing the use of “continuous caudal anesthesia,” as they dubbed their new method, in thirty-two births. “In all of these cases,” the doctors noted, “there was complete eradication of all the pain and discomfort of labor within five minutes after administration of the anesthetic.” By carefully prolonging the course of anesthesia, Hingson and Edwards maintained pain relief for up to thirteen hours of labor.⁵⁶

Hingson and Edwards' new method was covered briefly in *Time* magazine in September 1942. Calling it “a remarkable new type of childbirth anesthetic,” the article noted some of the new procedure's potential benefits, especially in contrast with “other anesthetics”: it appeared

⁵⁶ Waldo B. Edwards and Robert A. Hingson, “Continuous Caudal Anesthesia in Obstetrics,” *American Journal of Surgery* 57 (Sept. 1942): 459–464.

that the continuous caudal method shortened the duration of labor, eliminated common anesthetic “aftereffects” of vomiting, nausea and delirium, and did not inhibit the infant’s respiratory function.⁵⁷ Extensive press coverage of continuous caudal anesthesia, however, did not truly begin until Hingson and Edwards’ larger-scale follow-up study was published in the *Journal of the American Medical Association (JAMA)* four months later.

In January 1943, Hingson and Edwards reported in *JAMA* that they had used the continuous caudal method alone on six hundred consecutive deliveries. “We believe,” they stated, “that continuous caudal analgesia has opened a new medical horizon to the profession.”⁵⁸ Mothers, too, noted Chicago obstetricians Thomas Gready and Close Hesseltine in the same issue, “were definitely pleased with the results.”⁵⁹

The popular press response was prolific and enthusiastic. The same week the *JAMA* issue was printed, an article appeared in the *New York Times* with the headline “Child Birth Technic Hailed as Painless,” and the *Hartford Courant* reported, “It would seem beyond doubt that two young physicians ... have found that relief for the pains of childbirth.” The *Atlanta Daily World* printed a large picture of “one of the first women to benefit by the new painless childbirth method,” and the *Chicago Defender* called continuous caudal anesthesia a “boon to future mothers.” Articles describing the new procedure also quickly appeared in *Time*, *Newsweek*, and *Science News Letter*. Mothers who had given birth before their experience with continuous caudal anesthesia told the health magazine *Hygeia* that the change between the “old” forms of

⁵⁷ “New Anesthetic for Childbirth,” *Time*, Sept. 14, 1942, 68.

⁵⁸ Robert A. Hingson and Waldo B. Edwards, “Continuous Caudal Analgesia in Obstetrics,” *The Journal of the American Medical Association* 121 (Jan. 23, 1943): 225.

⁵⁹ Thomas G. Gready Jr. and H. Close Hesseltine, “Continuous Caudal Anesthesia in Obstetrics,” *The Journal of the American Medical Association* 121 (Jan. 23, 1943): 229.

anesthesia and caudal “was simply indescribable. It was the difference between pain and suffering and no discomfort at all.” Throughout the country, the press referred to continuous caudal anesthesia—as they had twilight sleep during the 1910s—as simply “painless childbirth.”⁶⁰

Follow-up reports which soon appeared in medical journals likewise described the procedure as “dramatically painless,” “comfortable and painless,” providing “complete relief from pain.” Besides pain relief, continuous caudal anesthesia was also celebrated for the way it avoided many of the dangerous side effects present in older forms of anesthesia like twilight sleep, narcotics, and ether. Doctors also observed that labors appeared shorter under caudal anesthesia, and less blood was lost. Most significantly, the alert and responsive patient was able to communicate and cooperate with the guiding physician. This projection of a woman whose childbirth was not only pain-free but relaxed and conscious was a radical departure from the uncontrolled and unremembered labors under twilight sleep or heavy narcotics.⁶¹

The response to continuous caudal anesthesia was not wholly positive. Physicians were largely hesitant to match Hingson and Edwards’ enthusiasm and instead took a critical and conservative stance on the procedure. For example, the inventors’ initial article in *JAMA* in early 1943 was partnered with a piece by obstetricians Gready and Hesseltine that discussed more in

⁶⁰ “Child Birth Technic Hailed As Painless,” *New York Times*, Jan. 21, 1943; “Painless Childbirth,” *Hartford Courant*, Jan. 26, 1943; “Painless Birth Baby and Mother,” *Atlanta Daily World*, Jan. 26, 1943; “Painless Childbirth Seen Boon to Future Mothers,” *Chicago Defender*, Jan. 30, 1943; “Painless Childbirth,” *Time*, Feb. 1, 1943, 40; “Childbirth Without Pain,” *Newsweek*, Feb. 1, 1943, 65; “Painless Childbirth,” *Science News Letter*, Jan. 30, 1943, 67; Morris Fishbein, “Safe, Painless Childbirth,” *Hygeia*, March 1943, 215.

⁶¹ C. O. McCormick, et al. “An Experience with One Hundred Cases of Continuous Caudal Analgesia,” *American Journal of Obstetrics and Gynecology* 42 (March 1943): 305; Hingson and Edwards, “Continuous Caudal Analgesia in Obstetrics,” 229; George G. Andros and Charles W. Henderson, “Experience with Continuous Caudal Analgesia in Obstetrics at the University of Michigan Hospital,” *American Journal of Obstetrics and Gynecology* 50 (July 1945): 74; Arthur Baptisti, Jr., “Continuous Caudal Analgesia in Obstetrics: A Commentary,” *American Journal of Obstetrics and Gynecology* 48 (Jan. 1944): 103.

depth a series of contraindications to the method. Although its authors concluded by acknowledging the value of continuous caudal analgesia, they cautioned that its administration must be closely monitored.⁶² The editors of the *American Journal of Obstetrics and Gynecology* also advised discretion, warning doctors to be aware of the dangers that had been reported thus far. “Enthusiasm for a new procedure is natural when this is based on favorable personal experience,” they noted, but “nevertheless a sense of balance and proportion must always be maintained in passing final judgment.”⁶³ A follow-up editorial in the same journal in May 1944, as part of an issue largely devoted to a series of studies of continuous caudal anesthesia, again stressed the necessity of prudence. Hingson himself wrote a “special article” for the issue, supporting the views of its editors.⁶⁴

The medical establishment also challenged the popular press’s praise of continuous caudal analgesia, worrying that the proliferation of positive reports would cause improperly trained doctors to begin administering the anesthesia to satisfy growing patient demand. By May 1943, a professor of anesthesiology at the University of Georgia School of Medicine was already complaining to the *Atlanta Constitution* that the new method had been “ballyhooed beyond its possibilities” and noting the potent danger of patients demanding the anesthesia without fully understanding its effects and risks. The method, he said, “has received too much publicity for its own good.”⁶⁵ Likewise, the editors of the *American Journal of Obstetrics and Gynecology*

⁶² Greedy and Hesseltine, “Continuous Caudal Anesthesia in Obstetrics,” 229-230.

⁶³ Editorial, “Caudal Anesthesia in Obstetrics,” *American Journal of Obstetrics and Gynecology* 45 (April 1943): 719.

⁶⁴ Editorial, “Again, Caudal Anesthesia,” *American Journal of Obstetrics and Gynecology* 47 (May 1944): 722–723; Robert A. Hingson, “Contraindications and Cautions in the Use of Continuous Caudal Analgesia,” *American Journal of Obstetrics and Gynecology* 47 (May 1944): 718–721.

⁶⁵ “New Birth Anesthesia Called ‘Over-Ballyhooed’ by Authority,” *The Atlanta Constitution*, May 14, 1943.

remarked, “It seems unfortunate that the recent wide newspaper publicity may lead to false hopes among pregnant women as to the practicability and safety of a procedure which must be subjected to a longer period of observation.”⁶⁶

Hingson was also concerned about the effect of the press on physicians. In 1944, he complained, “Complications [with continuous caudal analgesia] have occurred and will recur if members of our profession continue to derive their scientific impetus from the popular magazines.” Caudal analgesia, he maintained, was a procedure that must only be performed by highly-trained experts in both obstetrics and in anesthesia. He cautioned, “The physician who attempts the use of continuous caudal analgesia without first seeing it properly performed ... has not performed continuous caudal analgesia.”⁶⁷

This caveat—that extensive training and specialization was required to administer continuous caudal anesthesia—severely limited access and prevented the method from catching on as rapidly as twilight sleep or other lower-tech methods. Continuous caudal anesthesia required a trained obstetrician and anesthetist present at every labor, but the vast majority of U.S. hospitals in the 1940s could not provide this expertise all the time. In 1940, there was likely only one physician in the country—Bert Hershenson at Boston Lying-In Hospital—working full-time as an obstetric anesthetist.⁶⁸ Even in 1948, Beth-El Hospital in Brooklyn was the only hospital in New York City with a permanent team of physician-anesthetists available all the time who could

⁶⁶ Editorial, “Caudal Anesthesia in Obstetrics,” 719.

⁶⁷ Robert A. Hingson, “Continuous Caudal Analgesia: An Interim Report,” *Journal of the American Medical Association* 126 (Dec. 30 1944): 1129.

⁶⁸ Robert F. Hustead, Richard B. Clark, and Bradley E. Smith, “Our First 40 Years,” *Society for Obstetric Anesthesia and Perinatology*, 2008, <http://soap.org/first-40-years.php>.

administer caudal anesthesia.⁶⁹ The dearth of doctors trained in the caudal method was further self-limiting as it meant there were inadequate resources to train more doctors in the procedure.



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1. Seegar, J.K.B.E., and Devlin, A.J.: Maryland M.J. 5:339 (June) 1956.

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FIGURE 2: An advertisement for the anesthetic agent Nupercaine in the *American Journal of Obstetrics and Gynecology*, featuring art by famous medical illustrator Frank H. Netter. This ad, aimed at physicians, emphasizes “patient cooperation” as an ideal benefit of local block anesthesia. Advertisements for Nupercaine appeared regularly in the *American Journal for Obstetrics and Gynecology* throughout the 1950s.

American Journal of Obstetrics and Gynecology 76 (Dec. 1958): inside front cover. See also J. H. Walton, ed. *Control of Pain with Saddle Block and Higher Spinal Anesthesia*. (Summit, NJ: Ciba Pharmaceutical Products, Inc., 1948), illustration appears in full color on 14.

⁶⁹ “Hospital is Leader in Painless Births,” *New York Times*, February 23, 1948.

Even though continuous caudal analgesia was initially available only to a relatively small percentage of birthing women, it continued to be improved and refined in the years after its introduction. In the summer of 1943, Baltimore physicians Nathan Block and Morris Rotstein invented a method to test for proper insertion of the caudal needle, as improper insertion into the spinal cord could cause a massive overdose and be fatal.⁷⁰ Hingson then developed a flexible nylon needle to replace the silver one that had been prone to breaking.⁷¹ An apparatus to measure and control the flow of anesthetic solution was also designed around this time.⁷² In efforts to identify the safest and most effective type of anesthetic drug, several studies were run to test different drugs against metycaine, the current standard.⁷³

As a result of these refinements, use of continuous caudal anesthesia increased. In 1960, a trio of doctors from Maimonides Hospital in Brooklyn, New York reported that from its introduction, “the method and technique of caudal anesthesia became an integral part of our obstetric management.”⁷⁴ In a 1967 textbook on obstetric anesthesia, Seattle anesthesiologist John J. Bonica wrote of the caudal block, “Currently, it is considered by most American authorities one of the best methods of obstetric anesthesia.”⁷⁵

⁷⁰ Block and Rotstein determined that the rate at which a salt solution dripped into the injection site could accurately identify whether the needle had been correctly inserted, since saline flows more quickly into the spinal cord than into the epidural space. See “Childbirth Made Safer,” *Science News Letter*, July 10, 1943, 31; “New Method in Anesthesia,” *The Sun* (Baltimore), July 6, 1943.

⁷¹ “Nylon Needle May Be Used In Childbirth Anesthesia,” *Science News Letter*, July 8, 1944, 24.

⁷² “Childbirth Safer by New Method,” *New York Times*, June 12, 1944.

⁷³ G. Sydney McClellan and Edwin L. Williams, “Comparative Analysis of Drugs in Continuous Caudal Analgesia,” *American Journal of Obstetrics and Gynecology* 48 (Nov. 1944): 617–621.

⁷⁴ Alex Friedman, Samuel Schantz and Harry R. Pace, “Continuous Caudal Analgesia and Anesthesia in Obstetrics,” *American Journal of Obstetrics and Gynecology* 80 (Dec. 1960): 1181.

⁷⁵ Bonica, *Principles and Practice of Obstetric Anesthesia*, 574.

Beginning in the 1950s, however, many doctors had begun to experiment more with *lumbar* epidural anesthesia, which involves injecting anesthetic into the same epidural space as caudal anesthesia, but through the lumbar spinal region (in the woman's back) instead of the sacral canal. Although lumbar epidural anesthesia had been used clinically in some form since 1921, when Hingson and Edwards first began working on continuous epidural anesthesia they chose the sacral instead of lumbar approach because it was easier to ensure the needle went into the correct place. Block and Rotstein's method for testing proper needle insertion, along with the 1949 introduction of a vinyl catheter to deliver drugs into the epidural space, greatly improved results of the lumbar approach and the practice began to spread. At Alexandria Hospital in Virginia, for example, 5.8% of the deliveries in 1955 were done under epidural block. By 1959, that number leapt to 43.8%. Although usage still varied widely by region and hospital, Alexandria Hospital's statistics demonstrate the breadth of success that was possible with the method. By 1967, Bonica explained, it had "become increasingly popular among anesthesiologists and obstetricians, and currently is used widely in many obstetric departments."⁷⁶

By the 1960s, physicians with extensive experience with both types of anesthetics were beginning to prefer lumbar epidurals over caudal. Some noted that the sacral canal (through which caudal anesthesia was delivered) was more likely to have structural anomalies than the spine, so even when both techniques were skillfully administered the caudal method was slightly more likely to fail. Others realized that lumbar epidurals typically required smaller doses of anesthetic to be effective. Still other studies demonstrated that, especially when administered too

⁷⁶ Clarissa Dasser and John J. O'Connor, "Continuous Epidural Block for Obstetric Anesthesia," *American Journal of Nursing* 60 (Sept. 1960): 1297; Bonica, *Principles and Practice of Obstetric Anesthesia*, 611.

early, that the caudal method of administration often prolonged labor instead of speeding it up. In most other aspects, caudal and epidural anesthesia were equals: both provided effective regional analgesia and anesthesia without respiratory depression in the fetus or risk of headache or vomiting in the mother. Reports again emphasized “quiet, cooperative, and usually happy” patients as a major benefit of the lumbar epidurals. With equal benefits and fewer risks, lumbar epidural anesthesia gradually replaced caudal anesthesia, and it continues to be a popular choice in obstetric wards in the twenty-first century.⁷⁷

“A Natural, Normal Process:” Early Natural Childbirth and the Beginning of Prenatal Education

In his 1944 “interim report” on the state of caudal anesthesia, Robert Hingson cautioned, “Parturients in whom fear can be controlled by confidence in the physician and in their surroundings are the ideal ones for the use of continuous caudal and spinal analgesia. Parturients in whom fear is uncontrolled can still be more satisfactorily managed with amnesia and general anesthesia.”⁷⁸ In other words, caudal or lumbar epidural anesthesia was only satisfactory if the patient was already unafraid of birth. Otherwise, general anesthesia (and the resulting unconsciousness) was preferable. During the same time that Hingson was working with continuous caudal anesthesia, British physician Grantly Dick-Read developed another approach to pain management that identified the fear of birth itself as the source of pain, and attempted to tackle this fear not through drugs but at its root, psychological, source.

⁷⁷ Frederick W. Hehre and John M. Sayig, “Continuous Lumbar Peridural Anesthesia in Obstetrics,” *American Journal of Obstetrics and Gynecology* 80 (Dec. 1960): 1179; John J. Bonica, “Obstetric Analgesia and Anesthesia in General Practice,” *Journal of the American Medical Association* 165 (Dec. 28, 1957): 2153; Dasser and O’Connor, “Continuous Epidural Block for Obstetric Anesthesia,” 1299; Wolf, *Deliver Me From Pain*, 90; Sanjay Datta, *Obstetric Anesthesia Handbook* Fourth Edition (New York: Springer, 2006), 166.

⁷⁸ Robert A. Hingson, “Continuous Caudal Analgesia: An Interim Report,” 1129.

During the 1920s, Dick-Read had begun to theorize about the nature of pain in childbirth. He describes a transformative moment in his early career, when he attended the labor and delivery of a working-class woman in Whitechapel, England: the laboring woman—to his surprise—refused his offer of chloroform, and after the birth told him shyly, “It didn’t hurt. It wasn’t meant to, was it, doctor?” Slowly, Dick-Read explains, “even through my orthodox and conservative mind, I began to see light. I began to realize that there was no law in nature and no design that could justify the pain of childbirth.”⁷⁹

Over the next several years, Dick-Read’s experience in medicine and obstetrics led him to philosophize that the pain of birth was, indeed, not “natural” but instead largely a cultural construction of civilized classes. Citing anecdotes about “primitive” women who did not experience birth as a painful or disruptive event, he claimed that the only reason women felt pain during childbirth is because they had been repeatedly told and conditioned by society to believe that birth was painful.⁸⁰

Drawing from Edmund Jacobson’s 1929 book, *Progressive Relaxation*, about relaxation techniques in pain management, Dick-Read postulated that fear of childbirth caused tension in the muscles during labor, and this tension led to pain, which then engendered fear. The trick to breaking this cycle, he argued, was eliminating the fear of birth through prenatal education and preparation, and eliminating the tension through exercises and relaxation. In the early 1930s in England, he published his theories and recommendations in a book called *Natural Childbirth*, which prompted one London obstetrician to assert, “Nothing has been more remarkable in the

⁷⁹ Grantly Dick-Read, *Childbirth Without Fear* (New York: Harper & Brothers Publishers, 1944), 2–3.

⁸⁰ Dick-Read, *Childbirth Without Fear*, 5–6; Wolf, *Deliver Me From Pain*, 152; Sandelowski, *Pain, Pleasure, and American Childbirth*, 85–86.

practice of obstetrics in the last ten years than the increasing appreciation of the value of principles enunciated by Edmund Jacobson ... and afterwards applied to midwifery by Grantly Dick Read.”⁸¹

In 1944, an updated version of Dick-Read’s *Natural Childbirth* was formally introduced in the United States and retitled *Childbirth Without Fear: The Principles and Practices of Natural Childbirth*. In the book, written to be accessible to mothers and doctors alike, Dick-Read outlined his belief that childbirth is a natural process, and that pain is *not* natural but driven by a learned fear of birth. He then provided recommendations for education in pregnancy and labor, and for the conduct of labor. Evidence for his techniques and theories is drawn almost entirely from his own experience, narrated in the book as a number of “Records of Cases.”⁸²

News about the Dick-Read method spread quickly and extensively among women, often through informal channels. As Sandelowski argues, “Like the Twilight Sleep ‘furor,’ the Natural Childbirth ‘craze’ was created by word of mouth, by the popular print media, by the demands of a growing number of women, and by the willingness of a growing number of physicians to satisfy them.”⁸³ For example, in January 1948, an anonymous mother wrote a glowing article in *Parents* magazine titled “I had my 3rd baby without an anesthetic.” In a comfortable, colloquial tone, the mother described her decision to forego drugs for the birth of her third child, her discovery of Dick-Read’s work, and her earnest satisfaction with her delivery.⁸⁴ Jean Fay Webster, a mother of two, similarly reported that Dick-Read’s book was “fascinating reading and

⁸¹ Dick-Read, *Childbirth Without Fear*, 166–168; Sandelowski, *Pain, Pleasure, and American Childbirth*, 86; Herbert Thoms and Frederck W. Goodrich, “Training for Childbirth,” *Journal of the American Medical Association* 140 (Aug. 20, 1949): 1256.

⁸² Dick-Read, *Childbirth Without Fear*.

⁸³ Sandelowski, *Pain, Pleasure and American Childbirth*, 89.

⁸⁴ “I had my 3rd baby without an anesthetic” *Parents’ Magazine*, January 1948, 18–19, 86.

extremely convincing. The theory of natural childbirth just seemed so logical.”⁸⁵ As this “craze” caught on, Dick-Read’s teachings became influential in the continued development of birthing practices in the United States.

Like continuous caudal and epidural anesthesia, Dick-Read’s method of “natural childbirth” was popular largely because of the way it responded to and sought to correct problems with earlier forms of pain management like twilight sleep. Under this method, giving birth was “vivid and interesting,” “an experience worth having,” and “the climax of a mother’s rightful joy.” Jan Ruby gushed to *Parents* magazine of the birth of her daughter by the Dick-Read method, “I *enjoyed* my baby’s birth!”⁸⁶ Physicians who supported the Dick-Read method also reported on its clinical success. In 1946, *Time* magazine noted that Blackwell Sawyer, a physician in New Jersey, had tried Dick-Read’s method on 168 patients “with success in nine out of ten cases.” But the most expansive implementations of Dick-Read’s theories and philosophies were at the Maternity Center Association of New York, an institution that had grown out of philanthropic children’s health campaigns in the nineteenth century and now promoted noninterventionist birth, and at Grace-New Haven Hospital/the Yale Medical Center, which collaborated with the Maternity Center Association to develop a pioneer program in “prepared childbirth.”⁸⁷

At Yale, Herbert Thoms, Chair of the Department of Obstetrics and Gynecology, initiated efforts to adapt Dick-Read’s theories into a workable system of obstetric and prenatal care, with

⁸⁵ Jean Fay Webster, “Something New in Childbirth,” *Parents’ Magazine*, December 1949, 35.

⁸⁶ Webster, “Something New in Childbirth,” 77; Dorothy Lindecamp, “I wish all mothers knew,” *Parents’ Magazine* 26 (October 1951), 8; Jan Ruby, et al, “We had our babies without fear,” *Parents’ Magazine* 25 (June 1950), 80, 38 (emphasis mine).

⁸⁷ “Should It Hurt?” *Time* (July 22, 1946), 91; Edwards and Waldorf, *Reclaiming Birth*, 12–13, 31–32.

support from the Maternity Center Association. Inspired by a number of patients who had read Dick-Read's book, in 1947 Thoms and his associates began a yearlong study in which they enrolled every third maternity patient in a series of six prenatal classes which carefully described the "basic facts of pregnancy and labor" and introduced a number of exercises to prepare the women mentally and physically for labor. Pleased with the program's success, in 1948 the department added these classes to the typical prenatal program of "all ward and staff private patients," meaning that they determined the training to be useful for both paying and charity patients.⁸⁸

Under Thoms's guidance, the Department of Obstetrics and Gynecology at Grace-New Haven Hospital was becoming a pioneer of new and experimental methods of obstetric care. Besides the training for childbirth program, they also began a rooming-in program, one of the first in America, in which newborns would remain in the hospital rooms with their mothers instead of staying in a hospital nursery. Many mothers who delivered children at the Yale hospital took advantage of both training and rooming-in.⁸⁹ In 1948, a report in *Woman's Home Companion* praised the Yale clinic's work, saying that Dick-Read's "shining ideal of 'childbirth without fear' can now become a reality for the average American woman across the country."⁹⁰ The clinic emphasized letting patients know what to expect in labor and delivery, aiming to alleviate fear and enhance the woman's role in her own birth. Mothers who gave birth at Grace-New Haven mostly reported favorably on their experiences. Jean Fay Webster wrote in *Parents*

⁸⁸ Thoms and Goodrich, "Training for Childbirth," 1256–1257.

⁸⁹ Herbert Thoms, *Training for Childbirth: A Program of Natural Childbirth With Rooming-In* (New York: McGraw-Hill Book Company, Inc., 1950), 63–72. For more on rooming-in during the 1940s and 1950s, see Elizabeth Temkin, "Rooming-In: Redesigning Hospitals and Motherhood in Cold War America," *Bulletin of the History of Medicine* 76 (Summer 2002): 271–298.

⁹⁰ Morton Sonthaimer, "Miracle in the delivery room," *Woman's Home Companion*, Dec. 1948, 4.

magazine, “I would never again consider having a baby in any other way.” A questionnaire given to patients on the third day after delivery by Thoms and his associates revealed a wide range of experiences, from one woman who complained, “Lot harder than I expected it to be,” to another who replied, “I can really say I enjoyed this delivery.”⁹¹ The Yale clinic also attracted nationwide attention through newspapers and magazines. One article written by Alton L. Blakeslee for the Associated Press about special classes for fathers at Grace-New Haven was printed in at least twenty-five different newspapers around the country, from the *Times* in Hammond, Indiana to the *Democrat* in Tallahassee, Florida. In a 1950 article in *Parents*, mother Mary S. Foerster mentioned being intrigued by another article describing a mother’s experience at the Yale Maternity Clinic.⁹²

Although the Yale method and Dick-Read himself aimed to reduce the necessity of drugs used during labor, neither forbade their use. Instead, as Thoms and Goodrich reported, “analgesics and anesthetics are used whenever they are indicated, usually whenever the patient desires them.” They note that the term “natural childbirth” has often led the press to assume that the Dick-Read method means drug-free labor, but really “neither Dick-Read nor other writers on this subject have ever claimed that childbirth should be conducted without anesthetic aids, or that the Natural Childbirth regimen renders labor devoid of pain.” In 1951, a report on 1,000 women who had participated in the Yale program found that over half the women requested some anesthetic intervention, although it was typically limited to small doses of the opioids Demerol or Seconal or nitrous oxide gas, and a number of women gave birth without any drugs at all.

⁹¹ Thoms and Goodrich, “Training for Childbirth,” 1256; Webster, “Something New in Childbirth,” 77; Thoms, *Training for Childbirth*, 77–85.

⁹² Alton L. Blakeslee, “Dads Learn Baby Care,” *Times* (Hammond, IN), March 22, 1950, found in a collection of at least 25 identical articles from various newspapers around the U.S., Herbert Thoms Collection, Historical Library, Cushing/Whitney Medical Library, Yale University; Ruby, et. al., “We Had Our Babies Without Fear,” 39.

Dick-Read himself addressed this confusion in *Childbirth Without Fear*, saying, “Every woman has the anesthetic apparatus in her hand to use if she desires to do so. It is the absence of unbearable pain which is remarkable, not the absence of anesthesia.” Compared to the often-heavily sedated labors of the past century, the successes of the psychological and educational pain management techniques launched by Dick-Read and the Yale clinic were especially significant.⁹³

Training for childbirth, however, suffered from the same lack of resources and manpower as continuous caudal anesthesia did in the 1940s and 1950s. The Yale program, for example, required considerable support from obstetricians and obstetric nurses who both taught prenatal classes and were instrumental in guiding women through labor. As Thoms and Robert H. Wyatt explained in the *American Journal of Public Health and the Nation's Health* in 1950, “We emphasize that in addition to the usual prenatal program the education of the woman for the act of childbirth is important, and that sympathetic and continuous attention during labor must be maintained.” The Dick-Read method demanded physicians and nurses to be more actively involved in caregiving during the often-long process of labor and delivery. Typical hospitals could not afford to maintain those staffing levels around the clock. Even in hospitals where the Dick-Read method was established, it was a challenge to find nurses to stay with patients during the entire course of labor.⁹⁴ As a result, despite growing knowledge and acceptance of natural

⁹³ “Childbirth Pains Are Laid To Fears,” *New York Times*, Jan. 21, 1949; Herbert Thoms and Robert H. Wyatt, “A Natural Childbirth Program,” *American Journal of Public Health and the Nation's Health* 40 (July 1950): 787; Dick-Read, *Childbirth Without Fear*, 239; Herbert Thoms and Robert H. Wyatt, “One Thousand Consecutive Deliveries Under a Training for Childbirth Program,” *American Journal of Obstetrics and Gynecology* 61 (Jan. 1951): 207.

⁹⁴ Thoms and Wyatt, “A Natural Childbirth Program,” 788; Sandelowski, *Pain, Pleasure, and American Childbirth*, 109; H. B. Atlee to Herbert Thoms, Dec. 30, 1954, Herbert Thoms Collection, Historical Library, Cushing/Whitney Medical Library, Yale University.

birthing methods, during the 1940s and 1950s it was often difficult for many American women to access hospitals that supported this type of care.

Dick-Read's methods also drew a backlash from physicians who criticized the anecdotal evidence on which his theories were largely built and disliked the way he seemed to be turning women against their obstetricians. In the *JAMA* review of Dick-Read's 1951 book *Introduction to Motherhood*, the reviewer stated, "In spite of many virtues, this book is not suitable for American women. The author's harangue ... will certainly decrease the patient's confidence in her medical attendant and create the very fear that engenders tension and pain."⁹⁵ During the late 1940s and 1950s, Dick-Read and Thoms wrote each other frequently about their frustrations attempting to get the larger medical establishment to accept natural childbirth. "Until our colleagues are willing to recognise that the psychosomatic aspect of labor is more important than the purely mechanic, no advance will be made in the science of childbirth," complained Dick-Read in 1949.⁹⁶

Two of Dick-Read's most outspoken critics were Boston physicians Duncan E. Reid and Mandel E. Cohen, who devoted significant space in a *JAMA* article titled "Evaluation of Present Day Trends in Obstetrics" to denounce Dick-Read's work. "No data are offered" by Dick-Read, the authors claim, "to support the opinions and assumptions expressed by the author, and no data are offered to support the conclusions." The authors furthermore provide evidence refuting Dick-Read's claims that "primitive" or uncultured women do not experience pain in childbirth, and that most women educated in birth procedures no longer desire anesthetic drugs. In response to

⁹⁵ Review of *Introduction to Motherhood* by Grantly Dick-Read, *Journal of the American Medical Association* 147 (Oct. 27, 1951): 905.

⁹⁶ Grantly Dick-Read to Herbert Thoms, March 1, 1949, Herbert Thoms Collection, Historical Library, Cushing/Whitney Medical Library, Yale University. See entire folder titled "Correspondence: Letters from Grantly Dick Read 1947-1957" in Herbert Thoms Collection, Historical Library, Cushing/Whitney Medical Library, Yale University.

Reid and Cohen, Dick-Read wrote in a letter to Thoms, “I ... can neither be impressed nor persuaded by any of their arguments. They are so far from the truth of both experience and academic knowledge that their attitude will not persist.” But Reid and Cohen’s arguments were widely reported in the news, and debates over Dick-Read’s philosophies and practices persisted in the press and in medical journals.⁹⁷

Dick-Read’s notions of natural, painless birth were tied tightly to his perception of the relative labor ease of “uncultured” women in “uncivilized” populations, like the working-class Whitechapel woman who easily delivered her baby without an anesthetic and wondered, “It wasn’t meant to hurt, was it, doctor?” According to Dick-Read, civilized nations construct the idea that childbirth is painful and dangerous; women raised without this notion do not experience birth as traumatic. This belief became a major tenet of Dick-Read’s theories and was pervasive among his followers. A woman who had delivered using the Dick-Read method noted afterward, “There no longer seems to me anything surprising in the stories of Indian women following the march [i.e., standing up and walking with their tribe] immediately after giving birth to their children.” Frances P. Simsarian, who delivered her third child under Dick-Read’s method, remembered watching movies by anthropologist Margaret Mead about childbearing in the South Seas. “I saw them lie down in the fields and give birth to their babies in a few minutes, get up immediately afterwards and participate in the care of the baby, then walk back into the village.” Anecdotal evidence like these stories was used by Dick-Read and his supporters to suggest that

⁹⁷ Duncan E. Reid and Mandel E. Cohen, “Evaluation of Present Day Trends in Obstetrics,” *Journal of the American Medical Association* 142 (March 4, 1950): 618; Grantly Dick-Read to Herbert Thoms, May 2, 1950, Herbert Thoms Collection, Historical Library, Cushing/Whitney Medical Library, Yale University; “Study Finds Flaw in ‘Natural’ Birth,” *New York Times*, March 30, 1950; “Childbirth ‘Natural’ Way Held Inferior,” *The Sun (Baltimore)*, March 3, 1950; “Primitive Pain,” *Time*, March 13, 1950, 55.

easy childbirth was normal and the social trappings of civilization had simply corrupted women's minds and bodies to cause pain in labor.⁹⁸

These beliefs were highly controversial and led to increasing debate during the 1940s and 1950s about the existence and significance of pain in childbirth. Interestingly, many of the same arguments Dick-Read made about "primitive" women were also made during the twilight sleep movement, but during the 1910s they were used to advocate for substantial drug intervention instead of against it. The initial *McClure's* article describing twilight sleep observed, "Unlike her primitive sister, [the modern woman's labor] is attended by varying degrees of real pain."⁹⁹ This notion of primitive-versus-civilized women was used to support the *reality* of the modern woman's pain, and justify the use of heavy drugs to treat it. Dick-Read, by contrast, wanted to erase in women the social conditioning that lead to fear and thus pain, and return them psychologically—at least during birth—to what he perceived as a more primitive, natural state.

Reid and Cohen, Dick-Read's vociferous critics in Boston, took a systematic approach to tear down this idea of primitive pain. Noting that several articles had recently been published supporting the idea that pain was culturally created, they examined these articles and argued, "It is clearly apparent that no data are recorded, and hence there is no scientific or factual foundation for these statements." After reviewing an extensive list of anthropological works that might contain scientific and factual examinations of pain in birth, the authors concluded that only one study, an examination of Pima and Apache women's deliveries by the anthropologist A. Hrdlička, was satisfactory and it in fact concluded, "...the healthy Indian woman suffers ... quite as much

⁹⁸ "I had my 3rd baby without an anesthetic," 86; Frances P. Simsarian, "You're a Lucky Mother," *Parents' Magazine*, Oct. 1951, 160.

⁹⁹ W. Allen Conroy, "Analgesia and Anesthesia for Obstetrics, Inhalation Methods," *American Journal of Obstetrics & Gynecology* 48 (July 1944): 81.

and as long as does the normal white woman.”¹⁰⁰ This lack of scientific support for Dick-Read’s theories kept him on the fringes of accepted obstetric medicine.

During this time, other doctors around the world drew on ideas about pain, psychology and birth similar to Dick-Read’s to develop comparable programs in birth preparation. A group of Soviet physicians applied some of Pavlov’s ideas about conditioning to obstetrics, claiming that if a mother actively practiced relaxing before birth she would be better equipped to deal with the pain of birth. In France, physician Fernand Lamaze was inspired by these philosophies to develop a prenatal program of relaxation and breathing exercises for childbirth. As Lamaze explained to American actress Marjorie Karmel, “Dr. Read’s method is *accouchement sans crainte* (childbirth without fear); I give you *accouchement sans douleur* (childbirth without pain). Are you interested?” Karmel was, and her book about delivering her first child through Lamaze’s method, *Thank You, Doctor Lamaze*, was influential in popularizing the techniques in the U.S. In the 1950s and 1960s, Karmel partnered with Elisabeth Bing, a Dick-Read method educator, to form the American Society for Psychoprophylaxis in Obstetrics Inc. (now called Lamaze International). Like the Dick-Read method and continuous caudal anesthesia, the Lamaze method promised that “adequately prepared women [could] participate lucidly, cooperatively, and with dignity and gratification in the childbirth experience.” In Denver, Colorado, in the 1960s, obstetrician Robert A. Bradley pioneered “husband-coached childbirth,”

¹⁰⁰ Reid and Cohen, “Evaluation of Present Day Trends in Obstetrics,” 616–617.

which used husbands to help guide their laboring wives in relaxation techniques to reduce the necessity for drugs in labor.¹⁰¹

These training techniques and a general accommodation for the increasingly popular “natural” childbirth philosophy were gradually implemented in many hospitals. As a result, obstetricians and nurses alike began to actively involve the birthing mother in decisions about her labor and pain management. In 1951, Francis P. Simsarian wrote an article in *Parents’ Magazine* informing mothers about modern developments in childbirth and infant care. Her description of her labors can be contrasted with Constance Foster’s description of birth in *Parents’ Magazine* in 1940, which noted, “Your doctor will select the [method of pain relief] best suited to your particular case.” Pain, and thus anesthesia, was expected in 1940, and the role of the mother was limited to just lying there while “her muscles continue to go about their business.”¹⁰² Simsarian, however, identified tangible changes in the hospital’s attitude even between when she delivered her first and third children, likely caused by the burgeoning popularity of the natural childbirth movement. She said, “Gone was the sober nurse and her greeting, ‘Are you having much pain yet?’ And how she emphasized the yet!” Instead, the obstetrician and nurses were “cheery,” sympathetic and encouraged her to breathe to manage her own pain and delivery.¹⁰³ A 1950 article in the *New York Times* agreed that Dick-Read’s influence had been instrumental in engaging women in the birth process. “The articles that have

¹⁰¹ Wolf, *Deliver Me From Pain*, 155–157; Edwards & Waldorf, *Reclaiming Birth*, 33–48; Alfred Tanz, “The Theory of The Lamaze Method,” in *A Practical Training Course for the Psychoprophylactic Method of Childbirth (Lamaze Technique)*, ed. Elisabeth D. Bing and Marjorie Karmel (New York: American Society for Psychoprophylaxis in Obstetrics, 1961), 1. For more about the role of fathers in the delivery room, see Judith Walzer Leavitt, *Make Room for Daddy: The Journey from Waiting Room to Birthing Room* (Chapel Hill: University of North Carolina Press, 2009), chapter 6.

¹⁰² Foster, “New Techniques in Childbirth,” 41.

¹⁰³ Simsarian, “You’re a Lucky Mother!,” 160.

been written on the Read method, the discussions it has inspired at medical meetings—and over back fences,” wrote author Dorothy Barclay, “reaffirmed the importance of the mother in childbirth. For too many years, adherents felt, she had been looked on, paradoxically, as a sort of necessary evil in the delivery room.”¹⁰⁴ Although men still dominated the medical establishment and regulated prenatal education programs, this growing emphasis on the mother’s power and autonomy in birth represented a radical departure from the pain management techniques of the past century and suggested early stirrings of the full-fledged feminist birth movement that would appear in the 1960s and 1970s.

Despite detractors, between the Dick-Read Method, the Lamaze Method and their derivatives, training for childbirth took root and spread throughout the United States. In 1952, the Maternity Center Association of New York reported that significantly more prospective mothers and fathers were enrolling in maternity classes, “demanding a more active part in their own care.” This trend continued. Over time, the Lamaze name dominated the training methods, and has come to indicate any sort of prenatal training that emphasizes consciousness and minimal drug and surgical interventions in birth.¹⁰⁵

“Calm, Quiet, Relaxed and Rational:” Laboring women as patients and mothers

The way mothers and doctors described the benefits of both continuous caudal anesthesia and natural childbirth revealed more than simply the methods’ efficacy: it also illuminated contemporary anxieties about birth, images of the ideal doctor-patient relationship, and popular

¹⁰⁴Dorothy Barclay, “Natural Childbirth: A Progress Report,” *New York Times*, Jan. 29, 1950.

¹⁰⁵ “Maternity Classes Reported Increasing,” *New York Times*, June 3, 1952; Edwards & Waldorf, *Reclaiming Birth*, 52.

notions of what it meant to be a mother. In the 1940s and 1950s, with childbirth firmly located in hospitals and the maternal mortality rate declining, women began to lose some of their fears of childbirth and desire to engage more actively in labor and delivery. In the delivery room, the goals of doctors and mothers often aligned, even as their motivations differed. For a woman, a conscious and pain-free (or pain-managed) birth allowed her to demonstrate her maternal worth. For a doctor, a conscious and pain-free patient was much more amenable in the delivery room, able to follow the physician's orders and cooperate during the birth. Pain relief movements that began during this time, then, looked to accomplish both of these goals: provide doctors with cooperative patients and provide mothers with a fulfilling birth experience.

A number of women, raised in the twilight sleep era that praised unconsciousness and amnesia of labor had worried that a conscious birth would be uncontrolled and harrowing. Frances P. Simsarian, a mother of three, recalled her own mother describing "how terrifying the delivery had been for her." At the same time, many of these women had delivered children under general or twilight sleep anesthesia and found the results unsatisfactory. "I dreaded the thoughts of struggling back to consciousness after the anesthetic," wrote Simsarian in 1951 about preparing for her third birth. Jean Fay Webster, a mother of two, wrote of her first birth, "All that day my mind wandered as I fought the fog of anesthesia. I felt I had been through a terrible ordeal but I had no memory of it." Jan Ruby described being under gas anesthesia as "a state of half-consciousness ... a nightmare of sensations." "An oblivious delivery is completely unsatisfactory," explained another mother, describing, "When I regained consciousness and was told I had a son, I remember feeling cheated ... I couldn't help looking at my son for a week or

so afterward and feeling as if I'd won a Packard in a lottery.”¹⁰⁶ These women were beginning to resist the idea that an ideal labor was an unremembered labor—but what, then, did an ideal birth look like?

Reports in women's magazines and medical journals about continuous caudal anesthesia romanticized labor and delivery under the anesthetic as little more than a slight interruption in the mother's day. “Since the patient is not uncomfortable,” Hingson and Edwards explained, “she often enjoys natural sleep” during labor. Other studies agreed: “The patient [is] rendered sufficiently comfortable to enjoy reading and normal sleep.” Shirley Sachs of Staten Island, whose daughter Natalie was one of the first infants delivered with continuous caudal anesthesia, reported that the anesthetic method was so effective, “an hour after her baby was born she enjoyed a big, juicy steak.” One “experienced” mother who had given birth previously “interrupted her quiet luncheon to go to the delivery room and have her baby, and finished her luncheon when she came back to the room a little later!” Reports that were (perhaps deliberately) vague in describing the exact experience of birth often offered claims that, for example, the new method will “enable the mother to read a book or chat with her physician in perfect ease *while* her child is born.” (She likely could have read a book during labor, but delivery would still require some focused effort on her part.)¹⁰⁷ For readers, these reports offered an alternative to the traditional view of a laboring woman sweating and crying with exertion, replacing it with the

¹⁰⁶ Simsarian, “You’re a Lucky Mother!,” 42, 159; Webster, “Something New in Childbirth,” 77; Ruby, et al, “We had our babies without fear,” 79; Thoms and Wyatt, “A Natural Childbirth Program,” 790.

¹⁰⁷ Hingson and Edwards, “Continuous Caudal Analgesia in Obstetrics,” 226; McCormick, et al., “An Experience with One Hundred Cases of Continuous Caudal Analgesia,” 305; “Painless Birth Baby and Mother,” *Atlanta Daily World*, Jan. 26, 1943; Morris Fishbein, “Safe, Painless Childbirth,” *Hygeia*, March 1943, 215; “Painless Childbirth,” *Hartford Courant*, Jan. 26, 1943 (emphasis mine).

sterile, calm—if ultimately false—image of a woman calmly reading a book or enjoying a cup of tea as her child is delivered.

As with continuous caudal anesthesia, the image of the perfect natural childbirth mother, especially the one put forth in popular magazines, was of a put-together woman whose life was minimally interrupted by the experience of birth. A mother writing in to *Parents* magazine in praise of the Dick-Read method, said that after delivery, “I was tired, but not too tired to sit up and ... order a full-course duck dinner. Duck never tasted better!” Journalist Morton Sonthaimer visited a woman who had recently experienced a natural childbirth and reported on it in *Woman’s Home Companion*. “Every hair was in place,” he praised. “Powder and lipstick were on just so. Her eyes were shining.” Jean Fay Webster in 1949 said of her natural birth that after delivery her husband “remarked in amazement that I looked ‘wonderful!’—my lipstick was still on and my hair wasn’t even mussed.” These images presented by women (and one observing man) demonstrate that despite the effort exerted in labor, particularly under the natural childbirth methods, the preservation of an appearance of hallowed ease and domesticity was very important.¹⁰⁸

Medical journal articles aimed at doctors emphasized that continuous caudal anesthesia kept the patient “calm, quiet, relaxed and rational,” able to cooperate with the physician. Unlike patients under twilight sleep, caudal anesthesia mothers ran little risk of hallucination, loss of control, or self-injury. “With cooperative, rational patients,” explained nurses Clarissa Dasser and John J. O’Connor, “nursing care is much easier than it is with patients who are under the influence of opiates, barbiturates, or scopolamine, many of whom cry out to get out of bed or,

¹⁰⁸ Dorothy Lindecamp, “I wish all mothers knew,” *Parents’ Magazine* 26 (October 1951), 8; Sonthaimer, “Miracle in the delivery room,” 4; Webster, “Something New in Childbirth,” 77.

literally, crawl up the wall.” *Time*, reporting on Hingson and Edwards’s initial report, noted that continuous caudal analgesia “allowed mothers to remain wholly conscious and at ease during parturition and thus ‘to cooperate completely’ with the obstetrician.” A mother who was conscious and pain-free during labor became, to the doctor, an obliging vessel for his actions. Consciousness and cooperation was also emphasized in the Dick-Read method, but the mother was allowed slightly more control over her birthing experience.¹⁰⁹

Theories of natural childbirth and continuous caudal anesthesia also seemed to align well with current psychological theories about maternal-child bonding, especially the idea that it was vital to both maternal and child development that the mother be conscious during labor and awake to hear her baby’s first cry. Helene Deutsch, a Boston psychiatrist described by *Time* as a “temperate Freudian,” noted that women who experience general or amnestic anesthesia for birth often have a negative psychological reaction. “They feel cheated, disappointed, and ‘empty,’” and may not believe the child is really theirs, reported *Time* in 1946.¹¹⁰ Deutsch’s work on women’s psychology was particularly influential at this time. In her book, *Psychology of Women*, she says of birth that “the joy in accomplishment that is connected with the mastering of fear and pain” is deeply connected to a feeling of satisfaction that can make childbirth “the greatest and most gratifying experience of woman.”¹¹¹ To women in the 1940s and 1950s, birth was a vital moment in their maternal development, and they did not want to be unconscious to miss it.

What did it mean to be a mother and a woman during this period? Many historians subscribe to the image critiqued in Betty Friedan’s *The Feminine Mystique* of the 1950s suburban

¹⁰⁹ Gready and Hesselstine, “Continuous Caudal Anesthesia in Obstetrics,” 230; Dasser and O’Connor, “Continuous Epidural Block for Obstetric Anesthesia,” 1299; “New Anesthetic for Childbirth,” *Time*, Sept. 14, 1942, 68.

¹¹⁰ “Should It Hurt?” *Time* (July 22, 1946), 91.

¹¹¹ Helene Deutsch, *Psychology of Women Volume Two: Motherhood* (New York: Grune & Stratton, 1945), 248.

housewife as stereotypically domestic, feminine, and submissive.¹¹² “The husband headed the family; the wife occupied a permanent supporting role” during the 1950s, agreed historian Andrew J. Dunar.¹¹³ These historians often refer to Ferdinand Lundberg and Marynia Farnham’s 1947 antifeminist tome *Modern Woman: The Lost Sex*, which argued that women are biologically created to be passive, nurturing beings whose role is to support the breadwinning activities of the men. Under this view, carrying and bearing a child was one of woman’s chief “duties” and would result in maternal fulfillment. In their book, Farnham and Lundberg identify “the agony of childbirth” as a (malicious) construct of feminism; their ideal women do not suffer in birth because birth is “deeply meaningful,” and thus “always bearable.”¹¹⁴

Historian Joanne Meyerowitz, however, argues through a systematic analysis of popular magazine articles from the postwar period that Farnham and Lundberg’s view is on the “conservative margin” and represents only one—fringe—perspective on motherhood and womanhood at the time. On the other side of the spectrum, she notes, are women’s rights activists, who “condemned isolation in the home and subordination to men.” The vast majority of articles she read, though, fell somewhere in between these two extremes, representing the viewpoints of women who both glorified domestic ideals and supported professional achievement for women—sometimes even at the same time.¹¹⁵ This range of perspectives was apparent in mothers’ varied impressions of pain and childbirth during this time. For example,

¹¹² Betty Friedan, *The Feminine Mystique* (New York: Norton, 1963).

¹¹³ Andrew J. Dunar, *America in the Fifties* (Syracuse, NY: Syracuse University Press, 2006), 194; Sandelowski, *Pain, Pleasure, and American Childbirth*, 114.

¹¹⁴ Ferdinand Lundberg and Marynia F. Farnham, *Modern Woman: The Lost Sex* (New York: Harper & Brothers, 1947), 294.

¹¹⁵ Joanne Meyerowitz, “Beyond the Feminine Mystique: A Reassessment of Postwar Mass Culture,” *Journal of American History* 79 (March, 1993): 1475–1476

Sandelowski argues that Dick-Read's natural childbirth approach fit soundly in a maternalist, domestic vision of motherhood because of the way it valued women's happiness in childbirth as important for the success of her family.¹¹⁶ Some of the women who experienced natural childbirth, however, appreciated the way they felt knowledgeable and actively engaged in the process of birth, rejecting the idea that women should be passive and submissive.¹¹⁷ Clearly, there was not *one* image of an ideal mother. Accordingly, popular anesthetic techniques of the period did not serve just one paradigm.

Epilogue: Birth in 2011 and the legacy of the 1940s and 1950s

During the late 1960s and early 1970s, a new feminist movement grew in support of natural and home births, arising mostly independently from Dick-Read and Lamaze. While the 1940s natural birth movement had emphasized the importance of male physicians in directing birth and providing information to pregnant women, this feminist movement sought to reinstate women as authorities and take birth out of what activists saw as a paternalistic and pathologizing hospital setting. During the 1940s, women had accepted drugs as part of natural childbirth, but in the 1970s its supporters condemned any sort of pharmaceutical or surgical intervention.¹¹⁸ Some feminists specifically attacked epidural anesthesia. Medical anthropologist Emily Martin, who studies coded language and gender bias in medicine and science, suggested that epidural

¹¹⁶ Sandelowski, *Pain, Pleasure, and American Childbirth*, 114.

¹¹⁷ Thoms, *Training for Childbirth*, 79–80.

¹¹⁸ Wendy Kline, *Bodies of Knowledge: Sexuality, Reproduction and Women's Health in the Second Wave* (Chicago: University of Chicago Press, 2010), chapter 5. The 1970s home birth movement arose alongside the broader feminist health movement in which women aimed to de-mystify the medical profession and regain control over information about their own bodies. See Sandra Morgen, *Into Our Own Hands: The Women's Health Movement in the United States, 1969–1990* (New Brunswick, NJ: Rutgers University Press, 2002), chapter 4.

anesthesia served to “segment” the woman’s body, essentially allocating her lower half—which she can no longer feel—to the obstetrician who then performs work on it to deliver the baby.¹¹⁹ Sociologist Barbara Katz Rothman agreed; by relinquishing access to sensation, she argued, laboring women handed control of their bodies over to the attending physician.¹²⁰

Beginning in the late 1980s, however, this trend toward natural and home births began to reverse. The new modern woman, according to Wolf, juggled a career and children and wanted a meticulously organized life, which included careful control over birth. Now, in the 2010s, birth is planned to provide maximum ease and minimal disruption; the ideal is speed and convenience, and women again are asking for anesthetic drugs in the delivery room. “Pain-free,” wrote *Parents’ Magazine* in 2006, “is back in vogue.” In addition to anesthesia, planned elective Cesarean sections and induced births have become more and more popular as women have sought to precisely schedule the date and time of their births. In 2003, the rate of Cesarean sections in the U.S. was over 25%, but if surgical birth occurred only for emergencies, the rate would be about 15%.¹²¹

As part of this revived quest for pain relief, the epidural has again grown to be a popular choice in the delivery room. Today, about sixty percent of American women elect to use epidural

¹¹⁹ Emily Martin, *The Woman in the Body* (Boston: Beacon Press, 2001), 1987.

¹²⁰ Barbara Katz Rothman, *In Labor: Women and Power in the Birthplace* (London: Junction Books, 1982), 164–165.

¹²¹ Wolf, *Deliver Me From Pain*, 169–172; Rebecca Felsenthal, “Epidurals and Delivery Drugs,” *Parents’ Magazine*, August 2006, <http://www.parents.com/pregnancy/giving-birth/epidural/epidurals-delivery-drugs/>; Jane E. Brody, “With Childbirth, Now It’s What the Mother Orders,” *New York Times*, Dec. 9, 2003. This desire for more standardized, hospitalized births also caused many alternative birthing programs to shut down. In late 2009, New York City’s Bellevue Birthing Center, known for its support of natural births for poor women, closed. In early 2010, St. Vincent’s Hospital in New York City closed for economic reasons, but the hospital had been the only institution in the city that supported midwives who assisted at home births. After its closure, midwives were unable to negotiate agreements with other local hospitals, leaving them at risk of losing their licenses. See A. G. Sulzberger and Nick Pinto, “Bellevue Natural-Birth Center, Haven for Poor Women, Closes,” *New York Times*, Nov. 7, 2009 and Anemona Hartocollis, “St. Vincent’s Closing Puts Midwives in Jeopardy,” *New York Times*, May 5, 2010.

anesthesia during birth, more than double the number from the mid-1990s—and epidural techniques continue to improve, increasing their demand.¹²² Many of these improvements seem to respond directly to feminist critics like Martin and Rothman. For example, the new low-dose epidural known as a “walking epidural” allows a woman to maintain enough feeling to walk around during labor and recognize when to push during contractions, retaining control over her own body.¹²³

Prenatal training, not unlike that promoted by Dick-Read and Lamaze, is also popular today. An article on FitPregnancy magazine’s website identifies several different types of classes available, from Lamaze to Bradley to “Birthing from Within,” a class with a spiritual focus.¹²⁴ Some argue that these classes are still often intended to benefit the physician as much as the patient, like the training for childbirth program at Grace-New Haven Hospital during the 1940s and 1950s. As sociologist Elizabeth M. Armstrong suggests, prenatal education run by hospitals uses “a variety of strategies to socialize women to comply with hospital routines and expectations, even at the expense of their own interests.” But many mothers swear by childbirth

¹²² “What is an Epidural?” Parents.com, last modified 2009, <http://www.parents.com/advice/pregnancy-birth/giving-birth/what-is-an-epidural/>; Denise Grady, “Study Urges Painkillers in Labor for First Deliveries,” *New York Times*, Feb. 17, 2005; Laura Riley, “Pain Relief During Labor,” Parents.com, www.parents.com/pregnancy/week-by-week/29/pain-relief-during-labor/, originally published in Laura Riley, *You and Your Baby: Pregnancy* (Hoboken, NJ: John Wiley & Sons, 2006).

¹²³ Alice Lesch Kelly, “Labor Pain-Relief Primer,” Parents.com, 2002, <http://www.parents.com/pregnancy/giving-birth/pain-relief/labor-pain-relief/>

¹²⁴ Gayle Sato Stodder, “Have it Your Way: From Traditional to Alternative, There’s a World of Choices in Childbirth Education” *FitPregnancy*, 2010, http://www.fitpregnancy.com/yourpregnancy/labor_delivery/40728917.html

education, especially when it is run by an outside institution; they see it as an invaluable way to learn options and strategies for dealing with the pain of birth.¹²⁵

In July 2010, *New York Times* parenting blogger Lisa Belkin wrote a post called “The Idealized Birth” disparaging the idea that there should be a “perfect birth.” She presented brief anecdotes from women with varied perspectives: a woman who found her natural, vaginal birth far more fulfilling than her previous Cesarean section and epidural-mediated vaginal birth; a woman who delivered one child with an epidural and one without, and was hesitant to recommend natural birth because “the pain was so awful;” a woman who went in for a natural delivery and was upset that she ended up requiring a Cesarean section. “My first thought,” Belkin notes, “was ‘aren’t women past the burdensome fiction that there is an ideal way to give birth?’” Clearly not, she concluded, based on many of the birth stories and discussions she had collected.¹²⁶ Today, like during the 1970s, many women associate natural birth with feminism, autonomy, and freedom from the pathologizing influence of hospitalized birth. Others see it as barbaric and potentially unsafe. To some, the epidural signifies the pinnacle of convenience and dignity; to others, it is the easy way out.

An “ideal birth” today might come in many variations—but some common themes in modern birth narratives can be traced back to the goals of pain-management strategies developed in the 1940s and 1950s. Almost all mothers continue to emphasize the importance of consciousness during labor and delivery, whether the birth is drug-assisted or not. Birth should

¹²⁵ Elizabeth M. Armstrong, “Lessons in Control: Prenatal Education in the Hospital,” *Social Problems* 47 (Nov. 2000): 583; Stodder, “Have it Your Way.” See also Carolyn Sargent and Nancy Stark, “Childbirth Education and Childbirth Models: Parental Perspectives on Control, Anesthesia, and Technological Intervention in the Birth Process,” *Medical Anthropology Quarterly* 3 (March 1989): 36–51.

¹²⁶ Lisa Belkin, “The Idealized Birth,” *Motherlode* (blog), *New York Times*, July 15, 2010. <http://parenting.blogs.nytimes.com/2010/07/15/the-idealized-birth/>

not require a long recovery and the mother should “feel like herself” soon after delivery. Any anesthesia used should be safe for both the mother and child. Education is important, and in their stories many mothers describe relaxation strategies learned from books or in classes used to help manage the fear and pain of birth.¹²⁷

Continuous caudal anesthesia and training for childbirth arose during the 1940s and 1950s with similar goals for a woman’s birth experience: namely, that it be comfortable, cooperative and conscious. These techniques persist today in their most essential forms, and the image of birth that they established remains salient. Although it might be tempting to dismiss the idea that some births are better than others, it is clear through women’s own stories that the choice about pain management in childbirth still carries important cultural weight.

(word count: 12,427)

¹²⁷ For some examples of modern birth stories, see: Jennifer L. W. Fink and Marisa Cohen, “Epidural or Drug-Free Birth?” *American Baby*, May 2007, <http://www.parents.com/pregnancy/giving-birth/stories/epidural-or-drug-free-birth/>; Katherine Eastman Seeley, “One Mom Chooses an Unmedicated Birth,” *American Baby*, 2002, <http://www.parents.com/pregnancy/giving-birth/stories/one-mom-chooses-an-unmedicated-birth/>; Robin Elise Weiss, ed. “Epidural Birth Stories,” About.com, accessed Feb. 23, 2011, <http://pregnancy.about.com/od/birthstories/a/epiduralstories.htm>; “Birth Stories,” Pregnancy Today, accessed March 27, 2011, <http://www.birthstories.com/>.

Bibliographic Essay

When I first started thinking about my senior essay, I knew that I wanted to write about something that involved both women's health and a period of major therapeutic change. I read medical anthropologist Emily Martin's critique of epidural anesthesia in her book *The Woman in the Body* for an anthropology class, and was intrigued. It seemed to me that epidurals were ubiquitous in modern hospital procedure and I wanted to find out how they had started and how women and doctors had reacted to them over time.

I started my research by tracking down early reports about continuous caudal anesthesia (the precursor to the epidural, I learned through basic Google and Wikipedia searches) in *Journal of the American Medical Association (JAMA)*, *American Journal of Surgery*, and the *American Journal of Obstetrics and Gynecology (AJOG)*. Then I read a few years backward and forward in the journals to get a sense of what else was happening in obstetrics and anesthesia at the time. As I realized just how significant developments during the 1940s and 1950s were in changing the face of obstetric anesthesia, I decided to narrow my timeframe to that era and look at the two major pain-management techniques developed during that time: continuous caudal anesthesia (the precursor to the epidural) and early natural childbirth. I wanted insight not only into the medical and scientific experimentation that was occurring, but also how these methods played out at a clinical level and how women responded.

The *AJOG* was an important source, as it contained a comprehensive record of most major studies exploring various trends in obstetric anesthesia. Although Robert A. Hingson and Waldo B. Edwards's initial 1942 and 1943 reports on continuous caudal anesthesia were printed in the *American Journal of Surgery* and *JAMA*, many physicians published follow-up studies in

AJOG, complete with a short critique or endorsement of the technique. The journal also published studies on narcotics, spinal anesthesia, twilight sleep-type therapies, local anesthesia, and more, which demonstrated for me the scope of research and thought occurring around pain management for childbirth during the 1940s and 1950s. Through discussions, editorials and correspondence, the *Journal* also encouraged a dialogue between different physicians and medical authorities. Their arguments and critiques of various forms of obstetric anesthesia helped me to understand the waves of popularity of the different techniques and why and how they were supported or opposed.

I also consulted *JAMA* and the *New York State Medical Journal* to assess popularity of various anesthetic techniques in general medical literature. Several medical journals, notably the *AJOG* and *JAMA*, occasionally printed articles summarizing major trends in obstetrics and obstetric anesthesia that I found particularly valuable; for example, Duncan E. Reid and Mandel E. Cohen's article "Evaluation of Present Day Trends in Obstetrics," published in *JAMA* in 1950. Since straightforward journal articles often get bogged down with technical details that end up having little relevance to actual clinical practice, these articles were an important look at how obstetric anesthesia was practiced.

I also looked at a number of textbooks on obstetric anesthesia published in the 1940s and 1950s, to understand what was being taught as the "standard" of anesthetic care at the time. Surprisingly, a few of these books—notably Robert A. Hingson and Louis M. Hellman's 1956 *Anesthesia for Obstetrics* and John J. Bonica's 1967 *Obstetric Analgesia and Anesthesia*—were also invaluable for their descriptions of the history and development of specific methods of anesthesia.

Articles in the popular press, especially in magazines like *Time* and *Newsweek* and newspapers like the *New York Times*, the *Los Angeles Times* and *The Sun* (Baltimore), helped me understand how these scientific and medical advances were presented to the general public. Typically, reporters highlighted the idea of “painless birth” and glossed over the technical details of anesthetic administration. Publications that specialized in describing science and medicine to laypeople, such as the health magazine *Hygeia* or *Science News Letter*, tended also to report on some smaller developments in anesthesia, such as the development of a nylon needle for easier administration of continuous caudal.

I turned to women’s magazines to understand the perspectives of women during this period. Although I recognize that magazines are carefully curated and do not necessarily represent the voices and opinions of even a majority of American women, the magazines were still useful because they often contained first-person narratives and because they had been influential in helping women advocate for a particular anesthetic technique (as seen with the articles printed in *McClure’s* during the twilight sleep movement). *Parents’ Magazine* was probably my most useful source for articles on obstetric anesthesia published during the 1940s and 1950s. Yale has most back issues of *Parents’ Magazine* from 1940–1960 (although, unfortunately, not every issue) and the magazine frequently mentioned childbirth and anesthesia, typically through narratives of women describing their own births. If I had more time, I would have also liked to look at women’s private writings that described their birth experiences, like letters and diaries.

As I was trying to get a sense of the 1940s and 1950s within the larger history of childbirth, I turned to a number of secondary sources. Richard W. Wertz and Dorothy C. Wertz’s

1977 book *Lying-In: A History of Childbirth In America* tracked the trends of hospitalization and medicalization of birth. Judith Walzer Leavitt's *Brought to Bed: Childbearing in America, 1750 to 1950* (1980), as well as her 1980 article "Birthing and Anesthesia: The Debate Over Twilight Sleep," covered the history of obstetrics and childbirth pain management before 1940, including the role of women in making decisions about birth. Jacqueline Wolf's 2009 book *Deliver Me from Pain: Anesthesia and Birth in America* was one of the few books or articles available that is specifically about anesthesia and birth. It traced obstetric anesthesia throughout American history and considered its place in various social and political eras. Wolf's book was particularly valuable for me since it was published in 2009 (unlike most of the other histories of childbirth which were published in the late 1970s or 1980s) and thus included an analysis of anesthetic trends in the twenty-first century. Donald Caton's *What A Blessing She Had Chloroform: The Medical and Social Response to the Pain of Childbirth from 1800 to the Present* (1999) explored the social representations of pain in childbirth in popular literature and other arenas beyond medicine and the press. Although its scope did not include caudal/epidural anesthesia, Marguerite Sandelowski's *Pain, Pleasure and American Childbirth: From Twilight Sleep to the Read Method* (1984) was nonetheless an especially useful analysis of how mothers perceived pain in childbirth and subsequently attempted to "treat" it in the first half of the twentieth century. Randi Epstein's *Get Me Out: A History of Childbirth* (2010) provided another more modern perspective on the history of childbirth, but ultimately its lack of comprehensive notes and an inaccessible bibliography prevented it from being very useful.

Unfortunately, most of these secondary sources contained very little information on the growth and development of continuous caudal and epidural anesthesia. Besides the anesthesia

textbooks mentioned earlier, one unexpectedly valuable source I found through a Google search was the Society for Obstetric Anesthesia and Perinatology (SOAP)'s self-history of its first forty years (1968-2008), which also discussed the history of obstetric anesthesia from the mid-1800s. This document, available as a PDF on SOAP's website, was one of the only works I found that laid out the slow growth of caudal and lumbar epidural anesthesia in clinical practice and identified major actors in this effort. From there, I was able to identify a few relevant journal articles that charted the evolution from continuous caudal to lumbar epidural anesthesia.

I began researching early natural childbirth by looking at its pioneer, Grantly Dick-Read, and especially his 1944 book *Childbirth Without Fear: The Principles and Practices of Natural Childbirth*. I also turned back to medical journals, notably the *AJOG* again, which published reports from Dick-Read and Herbert Thoms (the Yale obstetrician who started prenatal training programs at Grace-New Haven Hospital) on natural birth and education for childbirth. Thoms published a book in 1950, *Training for Childbirth: A Program of Natural Childbirth with Rooming-In*, which carefully described the goals and strategies of childbirth education at the Yale maternity clinic.

I found that Dick-Read's ideas and Thoms's work were extensively covered in the popular press as well, with articles printed in the *Hartford Courant*, the *Los Angeles Times* and more both in support and in criticism. Women's magazines were again invaluable in this section of my research, and *Parents' Magazine* in particular contained a number of testimonials from women who had tried the Dick-Read method or other prenatal training. Since Thoms was head of the department of Obstetrics and Gynecology at Grace-New Haven Hospital during this period, I also looked at the Herbert Thoms Papers, which are archived at Yale's Medical Historical Library

in the Cushing/Whitney Medical Library. Thoms's prolific correspondence with Dick-Read was especially interesting as it demonstrated the ways both doctors struggled to get their ideas about childbirth accepted in the medical community.

I used both primary and secondary sources to understand the culture of the 1940s and 1950s and how this culture affected the way women and doctors understood motherhood and birth. A few books written during this period, such as psychologist Helene Deutsch's *Psychology of Women*, were a significant influence on thought at the time. Of secondary sources, Joanne Meyerowitz's "Beyond the feminine mystique: A reassessment of postwar mass culture, 1946-1958" from the *Journal of American History* was an extremely helpful in evaluating Betty Friedan's image of repressed suburban housewives and suggesting that during this period women often had significant and satisfying careers and lives beyond the house.

A number of secondary articles were especially useful in understanding childbirth and anesthesia in the eras before and after the 1940s and 1950s (which made up the bulk of my primary source research). For example, the 2008 *Explorations in Economic History* article "From Home to Hospital: The Evolution of Childbirth in the United States, 1928-1940" by economists Melissa A. Thomasson and Jaret Treber included a statistical analysis of maternal mortality data in its consideration of the effects of hospitalization on childbirth. Wendy Kline's 2010 book *Bodies of Knowledge: Sexuality, Reproduction and Women's Health in the Second Wave* described the women's health and natural birth movements of the 1960s and 1970s.

As I was finishing my research, I wanted to understand how the obstetric anesthesia developments of 1940–1960 had evolved into their current incarnations. I chose to turn again to *Parents' Magazine* and Parents.com to see how women's magazines have been discussing

anesthesia and birth in the past ten years. I found many of the same first-person birth narratives, alongside more straightforward resources explaining what kinds of pain relief and childbirth training classes are available today. I also browsed some recent news articles; *The New York Times* and its blogs contained several trend pieces on childbirth. Finally, I turned to modern textbooks on obstetric anesthesia like Sanjay Datta's 2006 *Obstetric Anesthesia Handbook* to understand how physicians today describe the advantages and disadvantages of various anesthetic techniques.

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