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Undergraduate

THE SUNSET OF TWILIGHT SLEEP

A story about how one drug cocktail changed the course of American obstetrics.

BY JONATHAN KUO

On quiet nights, residents strolling within Boston's Fenway neighborhood may have heard chilling screams echo through the equally chilly air, punctuated by the softer wails of newborns taking their first breaths. A particularly inquisitive—or concerned—person might trace the ruckus back to 197 Bay State Road, on an estate flush with the Charles River where, in 1914, a private hospital was established.^{1,2} This was not your typical hospital. Here, expecting mothers gathered under the care of the reputed Dr. Eliza Taylor Ransom and a fleet of nurses, eager to experience the novelties of “twilight sleep” and the painless childbirth they had heard it could deliver.²

At the time, twilight sleep described a cocktail of minute amounts of two drugs: morphine and scopolamine. Morphine, as we know now, floods opioid receptors scattered across the brain, spinal cord, gut, and every other location where neurons and electrical impulses assemble, delivering signals that diminish the experience of pain, at least temporarily.³ Scopolamine, meanwhile, targets and blocks a special type of receptor called the muscarinic acetylcholine receptor, which can be found in the brain, in junctions where neurons speak to muscles, and in clusters of neurons scattered across the body called ganglions.⁴ In the case of twilight sleep, when scopolamine acts on the brain, it interferes with signaling that encodes thoughts and experiences into neural circuits, causing short-term amnesia.⁵ Administered in this cocktail, the drug pair blocked pain and memories, allowing mothers to go through the excruciating process of labor without remembering a single thing.

For a generation of expecting mothers with few options for pain relief during childbirth, twilight sleep seemed in many

Figure 2: Jane Erin Emmett, said to be the first American child born in Freiburg, Germany with the twilight sleep method. In Freiburg's Frauenklinik, where the technique was created, doctors called it *Dämmerschlaf*.



Figure 1: A sketch of a mother holding up her baby, which was born by the twilight sleep method. The sketch was published in *The Ladies World*, a magazine for women's interests said to print “over one million copies monthly.”



ways like a miracle. Existing treatments—comprising primarily either ether, chloroform, or nitrous oxide (more commonly called ‘gas’)—were not particularly reliable, after all, nor were they available to every patient. According to historian Judith Walter Leavitt, “anesthesia use revealed wider practitioner variation than any other obstetric intervention” throughout the latter half of the nineteenth century.⁶ Some physicians used these agents in every birth they oversaw; others decried them as dangerous and deadly. Others still reserved them for the fraction of cases when “patients have demanded it with an emphasis which could not be resisted.”⁶ And even when a patient could get access to anesthetics, there was no standard regimen for dosing these drugs. Physicians administered them through whichever means they found comfortable, whether that be by a laced cloth held to the nose, or a glass filled with drug-soaked cotton, or a series of needle pricks, or some other method entirely.

Dr. Ransom's twilight sleep hospital was the first hospital of its kind in America, and Dr. Ransom was one of the first twilight sleep practitioners in the States. You would be hard-pressed to find another person better suited for the job. Ransom had learned its precise method that detailed a series of timed injections in Germany, under the direct supervision of the two physicians who had developed the practice. A renowned specialist in mental and nervous diseases, she had credentials from Boston University's School of Medicine (where she was top of her class and one of the first female graduates), Johns Hopkins Medical School, Harvard University, and the Neurological and Pathological Institute of New York.⁷ As a mother of two children, she was also intimately familiar with the pain of childbirth—she called it “needlessly [going] through hell”—and, consequently, the immense relief that something like twilight sleep could offer to mothers anxious about the birthing process.⁸

Over the next two years, Ransom would deliver over three hundred babies with the twilight sleep method. “None of them was attended by the slightest mishap,” she would proudly tell *The Boston Sunday Post*.⁹ In hospitals across the nation, hundreds of doctors would join her in delivering thousands of babies under the marvelous magic of twilight sleep. The method received coverage in popular

“For a brief moment, twilight sleep seemed ascendant, poised to revolutionize the course of American obstetrics and transform the birthing experience from one of pain to one of preference.”

magazines and hundreds of newspapers, local and national. Movement leaders rallied in department stores—where women commonly shopped—and created organizations and associations to publicize and praise the treatment. For a brief moment, twilight sleep seemed ascendant, poised to revolutionize the course of American obstetrics and transform the birthing experience from one of pain to one of preference.

And it did, but perhaps not in the way that its advocates might have wanted. The technique engendered critique from some mainstream physicians as fierce as the female support underpinning its spread. Some derided the technique as “pseudo-scientific rubbish” and “quackish hocus-pocus”—as nonsense spouted by women who did not know what they were talking about.^{10,11,12} Some claimed that the method would cause babies or their mothers to be “sickly,” “weak-minded,” or “insane.”¹³ One doctor called for censures from the American Medical Association, charging that twilight sleep’s organizers’ “first and only aim is the money part attached to it.”¹³ Supporters would vehemently claim that negative effects during childbirth were due to physicians executing twilight sleep in the wrong way, or that they were simply unrelated. But as scattered case studies and press coverage reported infants falling ill, or mothers dying during twilight sleep labor, the old medical guard slowly but surely began to reject twilight sleep.

Over the following decades, twilight sleep lost its grasp on American obstetrics, although the drug cocktail continued to be used in other contexts, like as a general anesthetic in a wide variety of surgeries.^{14,15} By the 1960s, few, if any, obstetricians used the method altogether. Now, while morphine is still widely used for pain relief, scopolamine rarely makes its way to the clinic. While it is sometimes used to reduce nausea, it is especially cautioned against in the first trimester because it can cause “limb and trunk deformities.”¹⁶

So, who was right? Was it the physicians who insisted that twilight sleep was untested and dangerous, or was it the women who believed that twilight

TWILIGHT SLEEP MATERNITY HOSPITAL

197 Bay State Road, Boston

Eliza Taylor Ransom, M. D.
Telephone: Back Bay 1716

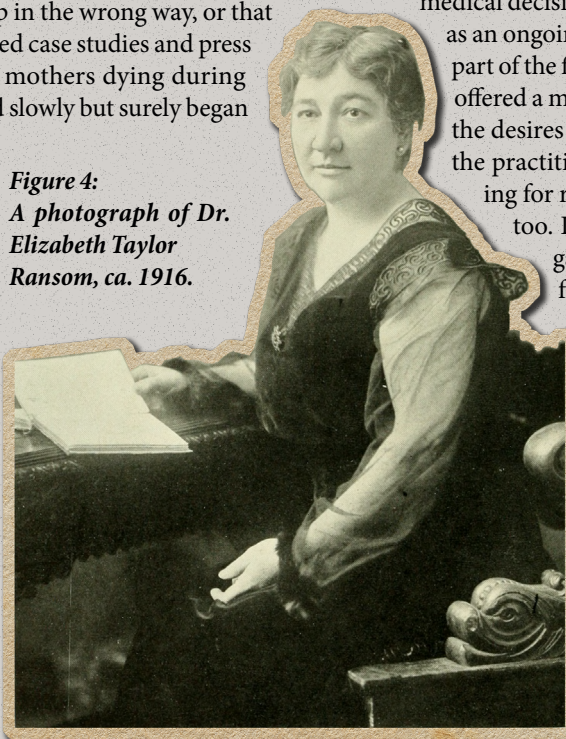
Consultation Hours:
9 to 11 A. M.

Figure 3: An advertisement for Dr. Ransom’s hospital.

sleep was, in Ransom’s words, “the greatest boon for motherhood the world has ever known”? The historical record seems to indicate that both perspectives have some credence. The pain relief offered by twilight sleep was not always complete: “observers witnessed women screaming in pain during contractions, thrashing about, and giving all the outward signs of ‘acute suffering,’” explains Leavitt, even though twilight sleep was supposed to offer painless labor.⁶ And, when administered callously, both scopolamine and morphine can have dangerous side effects: both drugs cause depression, or reduced activity, of the central nervous system, so an overdose of either can cause a patient to stop breathing.^{17,18} Even so, the normal spread of chloroform, ether, and gas had their medical problems too: like with twilight sleep, too low of a dosage could simply fail to offer pain relief, and too high of a dosage could cause death. Without statistics to compare their efficacy—an impossible demand from the archives, considering that treatment at the time was generally unstandardized and that we still lack a robust method to measure the intensity of pain, anyway—it’s difficult to discern whether twilight sleep or its alternatives were physiologically best for a mother in labor.

But unlike its alternatives, twilight sleep was especially potent in the way it socially transformed American medicine. Before twilight sleep, pain management during labor was primarily determined by either midwives, who had limited access to pharmaceutical treatments, or by physicians, who generally conceived of pain relief as a medical decision to be made by the physician, rather than as an ongoing dialogue between patient and doctor. As part of the first-wave feminist movement, twilight sleep offered a medical birthing experience centered around the desires of the mother, rather than the demands of the practitioner, at a time when feminists were fighting for rights like suffrage and access to education, too. Like suffrage and education, twilight sleep gave women a choice: to be relieved from and forget the pain of childbirth, rather than to be subject to the whims of the physician, who likely viewed women’s pain with “an aura of distrust” that historian Elinor Cleghorn has argued “been enfolded into medical attitudes over centuries.”¹⁹ At a moment when pain and fear often overshadowed the birthing process, twilight sleep offered feminists the right to forget the process, and to be free from an experience medical knowledge at the time had deemed largely inescapable. That, I think, was the true power of twilight sleep.

Figure 4:
A photograph of Dr.
Elizabeth Taylor
Ransom, ca. 1916.



CHARTS FOR RECORDING DETAILS OF LABOR.
TWILIGHT SLEEP IN LIGHT, MEDIUM, DARK ROOM.

No. Age
Name Date
Address Para

| | Success, complete. | Partial. | Failure. | Complications. |
|--|--------------------|----------|----------|----------------|
| TIME (pains began) | | | | |
| INJECTIONS: Drug, amount, make other notes (Memory) | | | | |
| SUBJECTIVE SYMPTOMS: Fatigue Thirst Pain in back, abdomen, perineum | | | | |
| OBJECTIVE SIGNS: Sleep, during, between pains Movements of the hands Flushing of the face Influence upon pain sensation Consciousness Excitation | | | | |

A record on this form should be made at the time of each injection.

Figure 5: A chart that might be used to keep records during twilight sleep labor.

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