

### Tied



My fourth son, Daniel, brought me a short rope and asked me to tie a knot. I smiled and rolled my eyes a bit, because this wasn't the first time. After a 10-month stint as a guide in a wilderness therapy program, I could do knots. I tied the bowline, the timber hitch, and the clove hitch with ease. I never mastered the monkey fist, but I tried my hand at the Celtic heart knot and managed the beautiful woven heart shape on my first try. My wilderness survival skills gave me cool mom points among my five sons, or so I imagined. "Right over left, then left over right," I handed the rope back neatly tied in his favorite: the square knot. Like me, he loves the way the rope stretches but only so far; the way it has two ends but when they're tied you can't really tell which is which; and most of all, the way whatever you want to hold onto stays securely fastened in the thrall of a good knot. Tied.

Family relationships are a type of rope, perhaps a bowline knot—great for securing a load but not if you ever want to loosen it, because it cannot be untied while the load relies on it. I really do think your mother should be your best friend. After all, you're simply two ends of the same rope. My mom disagreed. A mother needed to be a mother: always teaching, never indulgent. One particular argument won't unstick from my memory.

I'd just handed my mom my first-ever research paper in middle school, neatly printed with carefully cited references in the back, in a navy blue report jacket. It boasted an enthusiastic, red A+ on the front! I was proud of that A+ ... until my mom looked it over and began to yell. My smile wilted in hurt confusion. Why this anger about a report encouraging the preservation of the rainforests? I couldn't believe my ears. She'd just compared me with the singer she hated the most! Like Madonna, "prostituting" my talent. Now I was a "bleeding-heart liberal." She acted as if I'd betrayed her, because of a research paper on the relationship between rainforests and humanity.

I knew this criticism wasn't fair; I hadn't written anything untrue. The rainforest did need preservation, whether it offended her political sensibilities or not. Plus, I'd aced the project, according to the teacher's red pen. My face burned with a fury just as red, and in the top of my chest rose an irrepressible call to fight against this personal injustice. We could both be fiery when we wanted. I shouted that she was wrong because I believed in what I'd written. Just because she disagreed with my thesis didn't mean she couldn't celebrate my achievement. Like a tightly tied bowline, she held to her position. Perhaps she feared yielding might risk her precious load. She never apologized. Maybe the load was too heavy for us to retie our knot at that stage of my life. I pulled but it remained, carefully rigid with invulnerable authority. Her role required the image of perfection. That's what it was to be a mother, the matriarch of the home. She was always right, even if it hurt.

A mother doesn't stand alone; she's a relational figure. Her existence depends entirely on the existence of and connection with her child. Always there's the load-bearing rope connecting two people—a palindrome, the same backwards and forwards. A child doesn't exist without a mother, either. You can't get into this world without one. Everyone has a mother, whether the relationship develops into a fruitful, nurturing one or gets cut off at first budding. There's an undeniable and intangible bond between mothers and children. Is it biological, or merely sociological? Is it inherently good and prone to corruption? If it isn't inherently good, why do we expect so much from mothers in general, and hope for much from our own mothers specifically?

The mother-child bond is as mysterious as it is pervasive. Neuroscientists, who love to learn about how neuropeptide signals impact behaviors, explore this bond using rodents as

animal models. One neuropeptide, oxytocin, aka the “cuddle hormone,” is well known to increase bonding behaviors and trust between individuals, whether in mice or in humans. Maybe that’s all my mom and I needed: more oxytocin. In rodents, oxytocin is recognized as a natural hormone signal that floods certain areas of the brain during mating and birthing (Insel & Shapiro, 1992). An animal’s biology determines maternal ability, and the animal itself doesn’t choose to be a good mother or a poor one. It’s all biological. Is the human bond between mothers and children also merely animal instinct, embedded in the neuropeptides? Or is it something more?

My mom desperately wanted to be a good mother, and she sacrificed much of her personal life and pursuits to be in the home as much as possible, believing this was crucial to mothering. But fateful circumstances kept my dad out of profitable work for many years. My mom became a working mother when she was forced into the workforce for our family’s survival. Still, I remember my mom driving me in the minivan on busy, five-lane freeways, spider-webbing Arizona to get me where I needed to go. She regaled me with family stories about Grandpa Ben or Great Grandma Beatrice, so I would know where I come from. My mom taught me constantly from her own past mistakes, from sacred texts, from shared prayers, and from her example as a non-traditional Interior Design student. That she had the presence of mind to gain education to make herself employable in meaningful work did not escape my notice as a young high school kid. I admired her for it. She felt guilty. What a tragic contradiction!

And the apple doesn’t fall far from the tree. Now that my oldest is 16, I find myself following my mom’s footsteps. I study neuroscience at university because I want to better understand my own brain and the brains of my neurodiverse kids. I returned to school at age 34, after 12 years of being a stay-at-home-mom. Back then, my youngest son was 2 years old, so at first I only took classes online, but soon I needed access to labs to complete my science degree. This presented a problem. Neuroscientists know that early separation from mom means greater anxiety and actual physiological changes in the brain—at least in the degus.

A degu is a playful chinchilla look-alike in the rodent world that, in nature, grows up surrounded by family. It’s a good model for studying *attachment*, the sociological term for the bonds between people. Attachment styles are classified in four main types: secure, avoidant,

disorganized, and ambivalent (Pace, 2016). Attachment theory, originally developed by Mary Ainsworth and John Bowlby, posits that early connections between parents and children set the tone for the sense of security, belonging, and love children take with them into adult relationships (Siegel, 2012, p. AI-7). What's important is simply being there.

Researchers conducted a study where degu pups were divided into three groups: one group stayed with their families, another interacted through a wire mesh, and the third group was isolated from their mothers before natural weaning. After ten days, when placed in a field alone, the separated pups showed signs of anxiety and escape-seeking behavior. In humans, this might be referred to as anxious-avoidant attachment. Pups in the wire mesh group displayed healthy, secure attachment by initially staying close to their mothers and later exploring the open field (Colonnello, 2011; Uekita, 2019). We've learned a lot studying the degus.

Physiological and psychological changes maternal separation causes are troubling. Anthropomorphizing the degus into little human children, I imagine my own kids running around an open field, cowering and shivering because I'm not there to act as their home base. Researchers found that "even transient separation [diminishes] the developing limbic system when it occurs in the very early days after birth" (Uekita, 2019). The brain's limbic system houses memory formation, emotional responses, and fight-or-flight behaviors important to survival. If how children attach to mothers impacts their futures so strongly, then paying attention to the things that harm the mother-child bond is even more important than I understood before.

When I was pregnant with my first child, I thought the mother-child bond would be automatic, blissful, and beautiful. Our eyes would meet for the first time and my heart would melt—love at first sight. Like when Princess Elora Danan is born at the beginning of *Willow*, and the grunts of childbirth give way to a moment of perfect awe and connection (Howard, 1988). My reality didn't match up to the mythical ideal. Research shows in stressful childbirth situations, mothers struggle against another endocrine player: the "stress hormone" cortisol. Cortisol can damage or stall the birth process, interfere with a mother's ability to breastfeed, and interrupt natural bonding (Walter, 2021). Fear is the enemy of love.

In 1944, Dr. Grantly Dick-Read wrote *Childbirth Without Fear*. The book argues that a woman's psychological state impacts her physiological state, evidenced by tightening and labor regression caused by anxiety (Smith, 2010, p. 4). I read an old copy from my local library in Michigan as I awaited the birth of my first child. I believed if I could stay calm and relaxed, childbirth would be painless, with my son emerging slowly, naturally. Despite my preparations, like the Hypnobirthing CD and essential oils, my first birth would be a terrifying case study in how *not* to comfort a birthing mother. Think of the most dramatic childbirth scene in your favorite 90s film about starting a family—maybe *Nine Months*, starring Hugh Grant and Julianne Moore—and that'll come close to the horror of my first birth (Columbus, 1995).

“You are lying through your teeth!” I seethed through my own teeth at the certified nurse midwife (C.N.M.). She'd just told me the baby was almost here and I knew that couldn't be true because it hadn't happened yet and I'd been working on it for what seemed like forever. Oxytocin during childbirth is made in the hypothalamus, an inner part of the brain connected to the pituitary gland. It's also made by specialized cells in the uterus and along the membranes of the sack in which the baby lies. Oxytocin—once the baby emerges—increases 3- to 4-fold (Walter, 2021). But the baby was never going to emerge!

The labor lasted 28 hours and ended only after castor oil, vomiting, fecal incontinence, sleep deprivation, forced yoga between painful muscle spasms, and finally what I can only describe as hospital rape, in which my caregiver yanked my delicate, untried cervix with her intrusive fingers into a position more conducive to birthing my son. I screamed. Her response was only, “You'll thank me later. This is really necessary.” Receptors for oxytocin are found in the outer reaches of the brain's cortex, so oxytocin reaches places involved with the feeling of reward, the creation of memory, and the regulation of emotions (Walter, 2021). Where was my oxytocin when I needed it?

Despite my narcotic-induced haze, I could see exhaustion and frustration in my helpers. One C.N.M. had already gone home and another took her place. But I couldn't leave my shift. I was the only one who could bring Sam into this world. I couldn't stop working. I. Was. The. Doorway. There was no other way. The pain, the confusion, the physical and emotional abuse I experienced, all formed an impressive cortisol storm.

Mother-child bonding through oxytocin's influence happens like this: "... first, a selective recognition process that has to happen in a short period of time after birth and, second, the establishment of a permanent affection" (Walter, 2021). By the time Sam was eased out of my uterus, post pushing-as-hard-as-I've-ever-pushed-in-my-life, by gloved hands that slopped his purple, slimy shape onto my abdomen, I had nothing left to give. I didn't recognize this human being as a human being. He certainly didn't look like the babies in the Similac ads. Recognition between a mother and her baby happens because of oxytocin, but the second part of the process, the part that makes that forever mother-child connection, has to do with structural shifts in the maternal brain. These more permanent changes go beyond hormones to become neuronal connections (Walter, 2021).

Unfortunately, excessive stress during childbirth interrupts the first part of this two-step process. Cortisol triggers an endogenous, or inborn, opioid, as a pain reliever for mom. This opioid in turn puts a stop on oxytocin. With normal stress levels, this is a biological process that works to help the progression of childbirth. It controls the ebb and flow of contractions (Walter, 2021). But when stress levels skyrocket in a traumatic labor and birth, cortisol makes for an even longer birth—like my son Sam's. Samples of blood from first-time moms in labor revealed high levels of adrenaline in early labor usually meant longer, slower labor (Lederman, 1977). Dr. Dick-Read was right.

The stresses that spiked my adrenaline and cortisol exhausted me until I could barely function. When it ended, I didn't even care that someone took my baby boy away to clean him up, weigh him, and measure him. I rolled over and fell asleep. My body was so spent that I wet the bed. I never saw *that* in the movies.

A traumatic birth affects babies, too. Studies have shown high levels of adrenaline in a mother's blood correlate to abnormal fetal heart rates, while lower adrenaline levels resulted in normal heart rates (Lederman, 1985). My poor Sam, who had to be resuscitated, experienced this traumatic birth, too. Shockingly, one study reviewing people who suffered traumatic birth events—including breech presentation, meconium staining, forceps or vacuum delivery, internal version, and resuscitation—showed that birth trauma correlated in adulthood with double the risk of violent suicide in women, and five times the likelihood of violent suicide in men (Jacobson, 1998). Reading this brought on new waves of worry as my

oldest son is now a mere two years from adulthood. A decade prior, a study showed people suffering birth trauma may have an increased risk of opiate and amphetamine addiction as adults (Jacobson, 1987).

This increase of self-harm after a traumatic birth just seems to scream anxious-avoidant attachment. An “attachment figure,” usually a parent, is meant to be the “older, stronger, and wiser figure in a child’s life” (Siegel, 2012, p. 20-4), but this is not the case after a traumatic birth. One simply cannot expect healthy bonding when trauma stands in the way. Social needs, including family connections, are two notches below survival on Maslow’s Hierarchy of Needs (McLeod, 2023). First, physical healing; then the luxury of human connection.

La Leche League International (LLLI) acknowledged the danger for traumatic births to impact the mother-child bond when in a 1977 LLLI Conference, Dr. Murray W. Enkin published a list of patient rights for women having a cesarean birth. It included, “While it is important the mother and baby both be carefully observed after a cesarean birth, there is no reason why they should not be observed together” (Smith, 2010, p.7). Since then, grassroots movements have improved patient advocacy and birth practices in hospitals. Fathers are now allowed in the delivery room, women can choose their pain-control methods, birth plans are honored, and babies are immediately placed on their mother's chest even after a C-section (Smith, 2010, p.9). There are so many facets of a successful bonding experience right out the gate, but I’m comforted to learn that perfection is not required.

“No parent is perfect, and no relationship is without challenging moments,” says Daniel Siegel, author of *The Pocket Guide to Interpersonal Neurobiology* (2012, p. 20-3). For weeks I looked at my baby and didn’t recognize him as being mine. It didn’t help that we were 2,000 miles away from my side of the family and my husband’s family kept pointing out how much he looked like all of them. It didn’t help that breastfeeding was difficult and painful to establish. Depression lurked inevitably. No blissful, automatic bond appeared. First my body needed to heal; then my spirit. A mother denied a natural and expected progression of birth, breastfeeding, and cuddling suffers in isolation and struggles with emotional availability. Emotional unavailability leads to mom-guilt, and it becomes a vicious cycle, often culminating in postpartum depression (PPD).

Art imitates life in the German film, *The Stranger in Me*, starring Susanne Wolff as Rebecca. Rebecca can't wait to be a mother until repeated failures in her mother role build into a depression she can't control. PPD is heartbreakingly common in humans. The CDC reports 1 in 8 women who have just given birth suffer from depression (2022). After getting the treatment she needs for PPD, Rebecca gains the capacity to joyfully anticipate the smells, sights, and touches of her child (Atef, 2008). But in the throes of depression, it's simply not possible. Something in the mother-child bond is broken.

There were times my relationships with my own children have suffered traumas I thought would doom us to eternal brokenness. However, as Rebecca discovered on the other side of PPD, there is hope. Secure attachment in the mother-child bond doesn't require perfection, only "intention for connection" (Siegel, 2012, p. 20-3). Most mothers would probably say they want a positive, loving connection with their child. Bad relationship habits, media-driven expectations, and a lack of support can all lead to breaks in this bond. Siegel says when a break occurs in the bond, intense emotions disrupt alignment of the healthy relationship, resulting in "despair, and a longing for reconnection" (2012, p. 20-3). Relationships cycle, he explains, through connection, disconnection, dysregulation and despair, eventually reaching reconnection and repair (2012, p. 20-3).

There's something comforting in this idea, that relationships cycle rather than crystallizing into perfect specimens of love and understanding. As parents, and as children of parents, we all experience breaks in the fabric of our relationships, but hope appears through the mundane acts of service and affection we muster for one another. Even though Sam and I had a rough start, biology and time worked together to provide us with a second chance at bonding.

I looked at my four-month-old firstborn son asleep in my arms—finally asleep. For what seemed like an eternity, he would keep that one side eye just a tiny bit open, his last bit of defiance: *I won't sleep! You can't make me!* But finally he submitted, and drifted into sleep. His weight in my arms attested his complete trust. This was bonding. Oxytocin, cortisol, and adrenaline aren't the whole story when it comes to attachment, but they're all parts of the rope that tie me to my anxious, conscientious mom and my totally innocent firstborn son.



The good news for all kinds of families is that evidence is mounting against oxytocin as the be-all and end-all of mother-child bonding. It's important, but it's more complex than that. A meta-analysis of oxytocin and bonding studies reveals how: One study in 2007 showed that in pregnancy and during the first month after birth, high oxytocin levels could predict positive parenting behavior. But then another study in 2014 showed that oxytocin levels during pregnancy and in the second month after birth had nothing to do with parenting behaviors. When researchers categorized the data according to socioeconomic factors like income and the mother's own adverse childhood events, oxytocin lost its statistical significance. Having a low income coupled with adverse childhood events usually meant higher instances of negative parenting, no matter how high oxytocin levels rose in mom (Shorey, 2023). Though Mother Nature has provided biological processes meant to kickstart a bond, forming a healthy mother-child relationship seems to be as much, or maybe even more, about repeatedly showing up in sensitive ways to help your child.

Tactile comfort techniques have been used for centuries by diverse populations. Swaddling, a physical wrapping in fabric thought to simulate a womb-like snugness, has been practiced among Italians with the *bambino* and among native Americans with the *papoose* (VandenBerg, 1997). If that fails, then rock your baby. In studies, rocking calmed a baby who didn't want to be swaddled (Greenacre, 1953). Sucking, on a pacifier or a thumb, soothes a newborn and can help a baby deal with pain or discomfort (VandenBerg, 1997). My personal favorites for comforting my babies include massage and sound stimulation (VandenBerg, 2007), especially a lullaby. Bonding doesn't have to be done in only one way. There are many loving ways to tie us together.



The Celtic heart knot is no easy task to tie. It requires tying from both ends simultaneously—a palindrome. There's something delightful about this knot: it isn't

load-bearing at all. It's made with one rope and it's simply beautiful. Both ends pull equally on the center. The Celtic heart knot isn't self-conscious or worried at all.

The Celtic heart knot represents the love between two people, and like all Celtic knots, it seems to have no beginning or end, making it a natural symbol for eternity and eternal love. Tying this type of attachment in a family takes time and continued effort, but when it's done well, this knot can withstand the scissors of the Fates, even death.

In the film, *The Forgotten*, Julianne Moore plays the role of a mother, Telly, who's lost her child in a tragic plane crash that killed several other children from the same community (Ruben 2004). Her husband goes to work while she stands at her son's dresser, fondly caressing an old baseball mitt and wistfully touching photographs in an album. She's the model mother, still grieving her child 14 months after the accident that took his life, still in therapy to process that grief, and still watching home movies to keep his voice and image fresh in her mind. His name is Sam and she repeats it to herself every day. Somehow there's a secret power in this.

As the film progresses, we learn Telly's the only person on earth who remembers Sam existed. Her husband and therapist tell her she made him up after a miscarriage. But she is adamant that this isn't true. The film turns from pensive to action-packed as she finds another grieving parent and jogs his memory, which has somehow been wiped specifically to make him forget his daughter. Telly makes him say his daughter's name and her whole life comes back into his memory in a flood of images and sounds. The two grieving parents run first from the NSA, and then from aliens. Soon they find out people forgetting their children is the work of aliens running a heartless experiment on humans to study the parent-child bond. At the climax, the alien-in-charge tells Telly that they know this bond exists; it has an energy; it's a tissue; they can measure it. So they had to know: can it be dissolved (Ruben 2004)?

This high-concept film from the early 2000s makes a lot of implications about the parent-child bond. It implies first of all that there is such a thing, and that its tangible essence resides in human memories. While there's no evidence to suggest the mother-child bond is a tissue, it may be correlated to signals traveling through the white matter of the brain in areas strongly associated with emotion and memory: the thalamus, the cingulate, and the orbitofrontal cortex right above your eyes (Lorberbaum, 2002). This research seems to affirm

the hypothesis of the aliens in *The Forgotten*, that as long as you can remember your child, the power of your love will keep you connected. Tied.

I walked around my hospital room in Labor & Delivery slowly but with purpose. Record everything. Outside there was a butterfly on the door. It signaled to incoming shift workers that ours was not a room to enter casually. With my phone I took pictures of the room: the white board bearing our names and the name of our just-born baby girl, the wheeled bassinet covered in receiving blankets that all smelled powerfully of the same hospital-grade soap I would forever associate with her, the balloons shouting in balloon print, “It’s a Girl!” and the box in which clay molds of my precious only daughter’s hands and feet were permanently preserved. She was already gone.

Abigail Réileen. I say her name nearly every day, even now. Does it call her spirit from wherever she still exists into the room where I stand? I don’t know. I can’t always feel that swish of comforting endorphins I crave that tells me she’s with me. Still, everything I do is colored by our tie. I know this is more than oxytocin speaking, because she was born via C-section before a single contraction could stimulate that oxytocin process. But perhaps it is the white matter between the gray matter that makes up my brain. Maybe just looking at my baby after her birth triggered activity in parts of my brain that influence motherly actions.

A groundbreaking study conducted on mice demonstrated that damaging specific regions of the mouse brain, such as the cingulate gyrus and anterior thalamic nucleus, can reduce maternal behaviors such as nest-building, pup retrieval, and overall pup survival. According to the study, the extent of damage in these areas correlates to the level of dysfunction in maternal behavior (Slotnick, 1975). Annette Kersting, M.D., calls this particular connection between different parts of the brain the “maternal attachment network” (2009). Interestingly, the network implicated in motivating caretaking behaviors in animal models is also possibly key for humans grieving the loss of a child. The maternal attachment network is involved in maternal memory, grief, and pain (Kersting, 2009). I have a love-hate relationship with this network in my own brain.

I was already studying neuroscience when my first daughter, then still 22 weeks in my womb, was diagnosed via ultrasound with anencephaly. Fatality is 100% for babies with anencephaly. It’s a defect in the development of the neural tube. The top of the skull never

forms to protect the brain. After the initial shock of Abigail's diagnosis, I looked to see if there was a lab on campus researching neural tube defects like Abigail's. Of course there was—a beautiful coincidence. I met with the faculty mentor while still pregnant, planning to join after Abigail's birth in February 2020. Oxytocin demanded it. Or something else did—maybe a tangible tissue with a measurable energy only aliens can ascertain. Maybe it was the maternal attachment network at work in me. What made me feel driven to connect with my daughter this way, by doing research on the developmental defect that would claim her life? Call it a biological drive, because it felt like that.

Yet, there was something spiritual in this drive, too. In the Disney film *Soul*, viewers delight at an animated rendition of a premortal world—a place where innocent souls live before they come to earth. The movie reaches us on a deeply spiritual level because it's about cosmic things. A lot of us believe we didn't just pop into existence at our birth, and that the soul goes on beyond death. When Abigail came to our family, it challenged my faith in a watchful God. Yet, the little faith I held onto gave me hope that Abigail and I are part of one larger, eternal family. I believe our relationship not only preceded these tragic, tumultuous moments, but that it will go on forever after them. On the long night after Abigail's death, I wrote:

I have loved you since forever  
 And now I remember  
 It aches and it stretches  
 My heart reaches out to yours

I have known you for forever  
 And now I remember  
 It grows and it trembles  
 My heart knows yours

I have sat with you before  
 Somewhere far away and long ago  
 And now I remember

And I will never forget again.

I will not forget her. Her essence, her presence, the way it filled the room, the way her persistent strength to breathe through a severe facial cleft made me want to be stronger for her. How could someone so small, so new to life, be so wise and so strong? Abigail's tenacity through her struggles inspired everyone who met her, and even many people who never will. Children come to mothers as much to teach them as to be taught. If attachment figures are those who are older and wiser and stronger, Abigail is my attachment figure, instead of the other way around. If she is going to the highest of the seven heavens, I will do anything to be her equal so I can be there with her.

It's been said that few people understand grief like a mother who has lost a child. In studies of women who terminated a pregnancy due to birth defects, looking at pictures of happy baby faces within two months of their loss triggered the same brain areas that light up when someone is experiencing physical pain, such as the cingulate cortex (Kersting, 2009).

Seeing the face of a happy baby caused them intense pain tied to remembering. Researchers saw increased brain activity in the frontal, medial, and posterior cingulate cortex. The posterior cingulate cortex lights up as a connection between emotion and memory, where an emotion is triggered by something in a person's environment that reminds them of the original event (Kersting, 2009). Following the example of those who suffered before us, my husband and I carefully created memories around Abigail's birth and death that were beautiful to us, including emotive cues like music, poetry, art, and handcrafts. Through this, we ensured at least some of the triggers in our post-Abigail environment would be happy ones. From the moment I conceived Abigail inside me, we were tied. For better or for worse, our fates would never be separate again.

In saving her, I also saved myself. Like the symmetry of the Celtic heart knot.

"Mom" is a palindrome, a word pronounced the same backwards as well as forwards. This is fitting since the title refers to a person who wears so many hats and serves so many archetypes that she has become quite literally all things to all people. "Mom" can be uttered as a prayer with pleading and reverence, or as a swear word with fierce malice. It can be shouted in annoyance or grumbled under one's breath with equal satisfaction. Sometimes this

word all by itself means love, like when my fifth son, Corbin, runs into my arms at the end of my school day and exclaims, “Mommy!” Like two ends of the same rope, a palindrome leads one to a shared center.

In the film *Tenet*, another palindrome, a mother betrays her husband to save her son. Her son sacrifices his life to save the world. Perhaps the most famous mother is Mary, the Mother of Jesus. She and Joseph save him from King Herod’s mass infanticide, and Jesus saves the world. Mothers save their children every day of their lives. Those children grow up to make big waves in the world, hopefully for the good of all. It’s not hard to see the mother-child bond as something holy, something that even has the power to save the world.

I died for thirty seconds during Abigail’s C-section birth, adding me to a special club of Amniotic Fluid Embolism (AFE) survivors. Last Saturday, at a virtual support group for AFE survivors who lost their children, I had the singular experience of hearing my own thoughts come out of someone else’s mouth. Cheryl<sup>1</sup> said it: I just want my son to be proud of me. Cheryl, like many women who suffer AFE, remained in a coma for a month after her son was born. That separation period can come to haunt mothers who survive AFE because during that time someone else has been mothering and bonding with their baby. Over and over again, different mothers in the group express their tremendous sense of loss. I felt it myself, even though I was only out for a few hours while ICU doctors and nurses brought my brain back online. But I was not the first one to hold my daughter. That’s a wound that doesn’t go away.

For Cheryl, the wound goes ever deeper: her son died before she woke up from the coma. She woke to the reality of a dead baby, and amnesia. Speaking with an impediment caused by brain damage, she described her initial confusion. Her brain tried to make sense of what had happened. It told her that because her son had died, she had to live his life for him now—for the rest of her life. Only after some part of her brain reconnected did she realize this didn’t make sense. *She couldn’t live his life for him*. She could only live her own life. But strangely, when I heard her express this idea, I found myself nodding vigorously. Because to me it made sense, cosmically: that I should live the rest of my life for Abigail because she couldn’t do it herself.

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<sup>1</sup> Name changed for the sake of anonymity

I think the separation of babies from mothers has been heavy and traumatic for so many AFE survivors because separation feels wrong. The brain tries to make sense of it, but it really just can't. Because mothers without babies don't make any sense at all. And neither do babies without mothers. Two sides of the same rope, tied into an intricate symbol of love.



You can hide something inside of a monkey fist knot: a rock, an anchor, something to keep your boat moored so it doesn't drift. The mother-child bond itself is like this anchored knot, mooring the boat of society so it stays docked to its core values. It's heavy with the suffering and sacrifices of mothers working to overcome their own past traumas, mental health problems, substance abuse, etc., in order to provide safe harbor for their child(ren). None of us is doing this perfectly. Some of us have brains with abundant oxytocin receptors, and some don't. There's hope for a rich, fulfilling mother-child relationship for each of us when we reach out in sensitivity to make a connection and tie the knot of our choosing. Knowing that your brain is involved in the physiological process of forming a connection with your child doesn't make the mother-child bond less real or less cosmic. There's still power, beauty, and comfort in it.

My mom and I have a secure attachment now. No specific incident healed our chasm of misunderstanding, but I think gradually she came to let go of the fear she would lose me if I came to different conclusions. And gradually I began to understand why that fear existed. If a mother bereaved of her child imagines somewhere in her brain that she must live that child's life for him, then how must this strange impulse play out in mothers whose children survive the perils of birth? Mothers over-identify with their children. I'd imagined my life was my own entirely, and that the things I suffered once I left the house were unwitnessed, affecting only me. My depression. My lost jobs. Only after many years as a parent can I comprehend that my mother not only witnessed these hard times in my life, but she *felt* them—on a deeper

level than I gave her credit for. No wonder she cared in middle school that my core ideals were straying from her own! “Integrative communication,” between a mother and child, happens “when each person’s differences are honored and their linkages are created through compassionate communication” (Siegel, 2012, pp. 27-3 - 27-4). My mom feared I would reject values that constitute her identity, and go off somewhere beyond the reach of her love and protection. That’s why she shouted about tree-hugging when all I wanted was praise for a job well done on my rainforest paper.

We still don’t see eye to eye on politics, but I never abandoned her core teachings of kindness, personal responsibility, freedom, and justice. My mom and I continue to prove to each other that we are here for the long haul. In my most painful life events, I have been pleasantly surprised to find my mom there with me in the storm—willing to suffer with me. There’s something to that mother-daughter tie that doesn’t dissolve upon becoming a grandmother, but only becomes stronger and thicker: an anchor, like the monkey fist.

The triumphant moment in the film *The Forgotten*, is when Telly—palms to the floor, struck by everything the alien experimenter can throw at her, and reeling from his thorough memory wipe—softly but defiantly insists, “I had life inside me.” This declaration changes everything. Though she was an outlier in the experiment, she destroyed the hypothesis that the mother-child bond could be dissolved through forgetting. Telly refused to forget Sam, even when she could no longer speak his name. She felt him inside her, remembered hearing his heartbeat for the first time, and knew that they belonged together. Tied forever.

I look at Maribel, my second daughter, my seventh child, lying in the bassinet beside my bed, breathing slowly and deeply, in and out. Sometimes, when I watch her breathing, I don’t even notice that I’ve stopped breathing as I strain to hear that quiet sound that’s proof of life. Then I remember to breathe and we do it together, in and out. In and out. Like we’re waves of the ocean—not the same but adjacent, part of the same swell. I know Maribel isn’t me and that one day she’ll scrutinize everything I believe and say and do. And she’ll choose her own way. Secure attachment empowers a child to reach her potential in the world beyond this nurturing relationship (Siegel, 2012, p. 20-3). But still I will feel what she feels. Sad when she’s sad. Ecstatic when she celebrates. Worried when her future lies in uncertainty



before her. Hopeful that her dreams become reachable. Tied—forever connected—to the child I once carried inside of me.

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