(this page) Taylor seen reflected in her own brain scans taken after her stroke. (opposite page) Taylor at home with her dog Finley.

Jill Bolte Taylor

BLOOMINGTON'S

Gift to the World

By **Elisabeth Andrews** Photography by **Ben Weller**

There's an online video of Bloomington neuroscientist Jill Bolte Taylor that's getting an average of 20,000 hits each day. In it, she describes how she watched her mind deteriorate on the morning of December 10, 1996. She had woken with a crippling headache, and soon began to notice a curious sense of detachment followed by the incremental loss of her physical and mental faculties. As a brain researcher, she was able to deduce the cause of her eroding cognition: she was having a stroke.

The video clip is from this year's TED (Technology, Entertainment, and Design) conference, the celebrity-studded invitation-only California event that features the likes of Stephen Hawking, Amy Tan, and Al Gore. Taylor's presentation was a crowd favorite, earning the previously unknown scientist instant fame, along with hugs from Robin Williams, Meg Ryan, and Paul Simon, among others. Three months later, she has already done a series of interviews with Oprah, sold her self-published book to Penguin's Viking division, received

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a number of offers for a movie deal, and been named one of *Time* magazine's "100 Most Influential People in The World."

Viewing the 18-minute video is a moving, visceral experience. But arresting as the play-by-play of her mental breakdown may be, it's the message of the presentation that is perhaps most unexpected. Though Taylor is all for stroke prevention, she says she learned something even more valuable from her golf ball-size hemorrhage than the importance of recognizing early symptoms. While incapacitated, she says, she discovered a new—and better—way of being.

"I experienced euphoria," she says. "I was entirely in my right brain, and it was so peaceful."

(above) Holding an actual brain and spinal cord, Taylor demonstrates how the brain contains two distinct hemispheres. (below) The May 12, 2008, issue of *Time* features Taylor as one of the "100 Most Influential People in the World."

In Her Right Mind

Taylor's closing words at the end of her TED presentation reveal the motivation behind her journey to Monterey for the conference: "I believe that the more time we spend choosing to run the deep inner peace circuitry of our right hemispheres, the more peace we will project into the world and the more peaceful our planet will be," she says, adding, "And I thought that was an idea worth spreading."

Sitting on her couch in Bloomington, 11 years after the stroke and fully recovered, she clarifies her position on the relative importance of the right and left brain.

"I'm not encouraging 'right hemisphere, period,'" she says. "I'm advocating for the balanced brain. I'm advocating for balancing the time I'm on 'go-go-go' and the time I'm just being healthy and peaceful and contemplative and open to new possibilities. If I spent all my time in the right hemisphere I would be zoned out and nonproductive. But we're not balanced generally in our society; we're always in the left brain. And it shows: We're exhausted."

The left brain, she explains, functions like a computer's serial processor: it ticks sequentially through information, categorizing, analyzing, and arriving at a point of conclusion. It was this logical ability that Taylor lost after her stroke. The right brain, by contrast, "is like a parallel processor," she says. "Everything happens at the same time. It's like standing at a beach: You're smelling the salt, hearing the rhythm of the waves and the birds, and feeling the sand and it's wet between your toes. That experience is an explosion of information about the present moment."

Taylor's life had been dominated by left-brain activity prior to the stroke. Born in Terre Haute 49 years ago, she attended Indiana University as an undergraduate, majoring in physiological psychology and biology. She went

on to a Ph.D. in life sciences research at Indiana State University before earning a post-doctorate position with Harvard Medical School.

She spent two years at Harvard's department of neuroscience and another two years researching psychiatry in addition to teaching head and neck anatomy for its dental school and working with the university's Brain Tissue Resource Center to solicit donations. She was 38 years old, settled in her investigative, scientific lifestyle, when a congenitally deformed vein-artery connection ruptured in her brain.

As Taylor worked to rebuild her brain in the months and years following the stroke, she was able to see with fresh eyes the disadvantages of active left-brain circuitry. "When I lost my left hemisphere there was an enormous relief from all my responsibilities and my emotional baggage," she says. "When those circuits started to come back online, I paid attention to how they felt inside my body. When anger came back, I could feel my blood pressure rising and my forehead getting tense and my jaw getting clenched. It physiologically felt bad to me, so I said this was not how I was going to be. I realized that I had the choice and decided to capitalize on it."

Although Taylor found a new emotional path, she opted to relearn her former profession, returning to her position at the Harvard "brain bank" as a spokesperson—or, more accurately, songsperson, as her method of persuading people to donate their brains to science involves a guitar and a cheery song. Although she relocated from Boston to Bloomington to be with her family (her father, Hal Taylor, is a well-known former Episcopalian minister and the president of the New Leaf–New Life program that helps inmates transition back into the community), she did go back to brain science by teaching first at Rose-Hulman Institute of Technology in Terre Haute and now in IU's medical sciences department, the Bloomington branch of the School of Medicine.

She is also the consulting neuroanatomist for the Midwest Proton Radiotherapy Institute, the cancer treatment center in Bloomington that uses proton therapy to target cancer cells while minimizing damage to healthy tissue. In addition, she works with the National Alliance on Mental Illness as the president of its greater Bloomington affiliate.

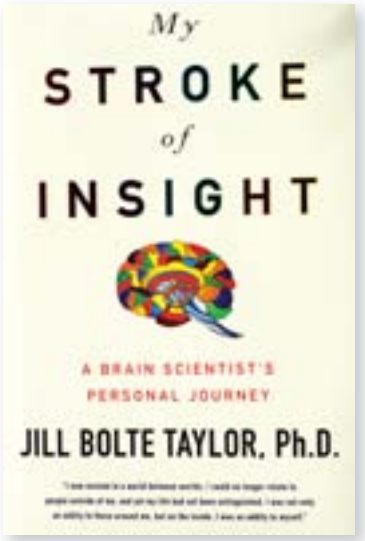
In the midst of all this complex thinking, she's also taking care to nurture her now-treasured creative side through sketching, sculpting, and, most notably, making stained-glass, anatomically accurate brains. Moreover, she's out to spread the message that there's a whole other hemisphere in there waiting to be enjoyed.

"The beauty of it is that you have two hemispheres—you have twice the brainpower and you have totally different tools to use," she says.

(left) One of the stained-glass, anatomically correct brains Taylor creates in her spare time.

(above) During her Harvard days, shown with fellow scientists Francine Benes and Stephen Vincent. (left) Taylor as an undergraduate at IU where she studied physiological psychology and biology.

(below left) The scar left after Taylor's surgery to remove a golf ball-size hemorrhage. (below right) Her book, published by Viking-Penguin, is now in stores nationwide.



Taylor's journey from a vegetative state to her present, vibrant health is a story of victory against remarkable odds.

A "Stroke Triumphant"

It was Oprah Winfrey who described Taylor as a "stroke triumphant"—more accurate than "survivor," she felt—during one of their interviews for her XM radio show, "Oprah & Friends." Indeed Taylor's journey from a vegetative state to her present, vibrant health is a story of victory against remarkable odds. When she woke in the hospital the afternoon of the stroke—she had just barely managed to call a colleague during the episode and emit a series of unintelligible grunts into the phone, prompting him to send help—she was unable to walk, talk, or recognize her loved ones gathered around the hospital bed.

"I didn't know who they were, but I knew they cared about me. That I could feel," she says. Although she couldn't remember what had happened, she could sense from looking at the brain scan posted beside her bed that something was wrong with her internally. "It was just obvious that there was this picture with a big white hole in the middle of it," she says.

As soon as she was able to grasp what had occurred, she says, "I grieved the death of that person that was me, which freed the new me to emerge." In the early weeks of physical and cognitive therapy, she imagined she might one day work again, perhaps as a gardener. "I loved yard work, and I thought if I could get enough of me back, perhaps I could tend gardens and yards for people," she says.

She was surprised, however, by how much and how quickly she was able to relearn. So she set an improbable goal—to follow through with a 20-minute presentation on brain anatomy she had scheduled before the incident that would take place three months from the date of her stroke.

"I made that my solitary goal. I didn't do anything else but that. I watched videotapes of myself giving scientific presentations and studied how I would tell a story. My goal was not to have anyone know what had happened," she says.

Taylor has a video recording of that presentation, but she has never watched it. Although, she recalls, she appeared to have succeeded in seeming perfectly well, she's reluctant to discover just how far she really was from full recovery.

"I haven't gone back to look at it," she confesses. "To go back and see it is to feel it again. To look at me with that hole in my head—it was powerful times. It was raw. Raw emotion. Raw life and death."

After the presentation, she concentrated on learning to drive again. Within six months after the stroke, she was back to "singing for brains," she says. But while she could concentrate on these tasks, what took much longer was regaining the ability to conceptualize a past and future.

"All I had was a present," she says. "I could have a conversation with you, but as soon as I turned my back, you didn't exist."

With help from her family, she developed systems to manage a schedule, and by the two-year mark was teaching neuroanatomy at Rose-Hulman. But it was four years, she says, "before I knew what one plus one was. Mathematics were the cells in my brain that died. All the others were traumatized, but those were lost. My mother was a college math professor," she adds. "How ironic."

It also took four years for her to be able to multi-task, "even something as simple as talking on the phone and boiling pasta." But by year eight, "I think I pretty much had back what I was going to get back," she says, including old memories from before the stroke. Today, there's only one thing that's still missing.

"I haven't been researching," she explains. "That's the one piece of the puzzle I have not reengaged with. To start getting grants again after all this time, you really have to start over from the beginning."

TED Transformation

Taylor was invited to present at the February 2008 TED conference after one of the organizers came across the book she self-published two years ago, *My Stroke of Insight: A Brain Scientist's Personal Journey*. Eager as always to share her story and discuss "the beauty and resiliency of the brain," she agreed to the engagement, never guessing that it would catapult her into the national spotlight.

"I just thought I was going to do an eighteen-minute presentation and that would be it," she says. "I had no idea there would even be a video. I'm so glad I didn't know where it was going to lead, or I would have freaked out."

She did have a minor "spaz attack" before her presentation, when she found herself shaking the hand of a man in the row behind her and realized the hand was attached to Al Gore.

"I started going, 'Oh my God, it's Al Gore! It's Al Gore! Oh my God!' and he said, 'And you are…' And all I could say was 'I'm Jill Taylor! Oh my God! It's Al Gore!'"

But the true whirlwind began as soon as her presentation ended. She recalls a standing ovation that lasted several minutes, during which she noticed that a sizable portion of the crowd was sobbing. The minute she stepped off the stage, Gore was the first to offer his congratulations, initiating a steady stream of celebrities and other high-powered professionals wishing to express their thanks for her moving message. Robin Williams, she recalls, got down on one knee, proclaiming, "We are the followers of the mighty la-la land," in reference to her description of what it was like to dwell entirely in the right brain. Meg Ryan, without a word, threw her arms around Taylor in a massive bear hug. Paul Simon, over dinner, counseled her on how to handle her newfound fame.

From preventive medicine guru Dr. Dean Ornish to self-help superstar Tony Robbins, she found herself awash in the interest and admiration of people she had previously looked to for her own inspiration. As she accumulated invitations to collaborate with bestselling authors, she barely had time to contemplate how, once again, her life had changed in the span of just a few minutes.

"I'm shocked by the explosion, the boom," she says. "I thought it would be a very slow process of word-of-mouth and people would read the book and give it away for rehabilitation purposes or for insight into the brain."

She hadn't counted on all the radio and magazine interviews, the article by broadcast legend and stroke survivor Dick Clark in *Time* that identified her as one

Taylor's presentation was a crowd favorite, earning the previously unknown scientist instant fame, along with hugs from Robin Williams, Meg Ryan, and Paul Simon…

(above) A vibrant speaker with a compelling story to tell, Taylor's presentation was the hit of the TED conference. She received a standing ovation lasting several minutes and a hug from conference curator Chris Anderson. You can view her presentation at ted.com/talks/view/id/229. *Top right photo by Andrew Heavens*

"I'd like to see Jodie Foster play me," Taylor says. "I think she could handle the science as well as the goofy side."

the world's 100 most influential people, the competing bids from major book publishers, and the offers from Broadway and film producers. ("I'd like to see Jodie Foster play me," she says. "I think she could handle the science as well as the goofy side.") She didn't know that strangers would come up to her in airports just to say, "Thank you."

She hadn't guessed, either, that her TED talk would allow her to finally complete the puzzle of rebuilding her life. Among the offers to join forces she received after her presentation were several research proposals from scientists in her field. By enabling her to get on board with well-established grant recipients, she can circumvent what had looked like the insurmountable roadblock of having been out of the funding game for more than a decade.

Manifesting Brain Appreciation

Taylor's vision for her future, however, has by no means been completed.

"I've got some dreams," she says. "I want to work on creating tools to help autistic children, because I feel like I essentially became autistic. I want to help these children figure out how to get out of their la-la land and transfer into some of the left hemisphere. I also want to create a Taylor Neurological Rehabilitation Institute. I'd love to do that in Bloomington. It would be for rehabilitation from any kind of trauma—war wounds, bike accidents—and it would work with the brain from a brain-body-mind perspective to help it heal and would train families on how to interact with these individuals and how to support them in home care."

Moreover, she says, her ideal facility would show families "how to celebrate what's going on instead of being demoralized. They would learn to appreciate the new gifts and new ways of perceiving."

Taylor's essential message, after all, is one of appreciation for the brain in all its complex, multifaceted, malleable glory. It was a brother with schizophrenia, she explains, who first prompted her to study brain science, and now that she has become her own best research subject, she wants to make sure that all families have the opportunity to embrace brain differences as well as brain recovery.

The most important aspect of loving the brain, she says—and with it the self, the human race, and the planet—is finding the right-brain bliss that she accidentally stumbled upon during her illness. She says that reaching that state is just a matter of being open to the present moment.

"It's a willingness to say that, right here, right now, I'm going to look at what's around me. I'm going to let my world go soft and listen to the sounds," she says. "For some people the only time they are like that is when they are on vacation, but I think most people can identify a character inside of themselves that they can relate this to."

Taylor promises that, as she told her soon-to-be fan club at TED, once you surrender to your right brain you'll discover for yourself the most important research finding of her career: "We are all brothers and sisters on this planet, here to make the world a better place. And in this moment we are perfect. We are whole. And we are beautiful." ✲

How to Diagnose a Possible Stroke

Use the mnemonic below to help you remember the signs of stroke. If you or someone you know exhibits these symptoms, call 911 immediately.

S	T	R	O	K	E
(problems with language) **Speech**	(numbness in your body) **Tingling**	(or any problems with thinking) **Remembering**	**Off balance**	**Killer headache**	(problems with vision) **Eyes**

the TIME 100 Gala

(counterclockwise from top left) Taylor and her mother GG, who was her primary caregiver after the stroke, in the lobby of the Essex House hotel in New York; Taylor exiting her chauffeured car outside the gala; Taylor talks to reporters on the red carpet. *Photos by Cliff Doerzbacher*

Like Cinderella at the Ball

Bloomington's instant celebrity was whisked to New York City for a gala ball honoring *Time* magazine's "100 Most Influential People in the World."

Jill Bolte Taylor's fairytale day in the Big Apple began with an appointment at the offices of her new publisher Penguin Group, where she met with publicity, marketing, and foreign rights representatives to discuss the launch of her previously self-published book, *My Stroke of Insight: A Brain Scientist's Personal Journey*. The contract was signed around noon, and by 1 pm, miraculously, the presses were rolling. (The book is now widely available at major bookstores throughout the country).

Back at her hotel, the Essex House on Central Park South, she readied herself for the *Time* 100 gala, where she and her mother GG would be "princesses at the ball." Taylor, who was honored for her contributions to science, had "no fear" of the red carpet, thanks to the gown she had custom made by Bloomington seamstress Rhonda Ruybal.

Penguin sent a chauffeured car to the hotel, and as soon as Taylor stepped up to the curb outside the Time Warner building, she heard photographers shouting, "Over here, Dr. Taylor! Up here, Dr. Taylor! A little to the left, Dr. Taylor!" She expected to walk the red carpet, she says, but "I didn't know that you could only take one step at a time because you have to stop for all the photos. Whoever expects to have a paparazzi moment like that?"

Inside was a second red carpet, beyond which the invitees were treated to hors d'oeurves and mingling time. Taylor sought out Elizabeth Gilbert, author of the bestseller *Eat, Pray, Love*, who was in fact seeking her as well. "We kind of chummed throughout the evening," Taylor recalls. After an exquisite dinner featuring rosemary- and mint-encrusted rack of lamb, Taylor and her mom enjoyed toasts given by Robert Downey, Jr. and presidential hopeful John McCain. The highlight of the evening, she says, was Mariah Carey's performance of her song "Hero," which the singer dedicated to the 100 *Time* honorees.

The final segment of the event was a gathering in the "schmooze room," where Taylor chatted with TV journalist Charlie Rose. "I told him it was one of my goals in life to be interviewed by him," she says, adding that he, too, seemed interested in the idea.

Collapsing into bed at the end of the night, Taylor and GG talked through every detail of the gala before drifting off to a deep, rewarding sleep. "There was so much buildup, it was very satisfying to have everything over."