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—ABRAHAM VERGHESE, MD, author of *Cutting for Stone*

INTO THE MAGIC SHOP

*A Neurosurgeon's Quest to Discover
the Mysteries of the Brain and
the Secrets of the Heart*

JAMES R. DOTY, MD

Praise for *Into the Magic Shop*

"*Into the Magic Shop* is pure magic! That a child from humble beginnings could become a professor of neurosurgery and the founder of a center that studies compassion and altruism at a major university, as well as an entrepreneur and philanthropist, is extraordinary enough. But it is Doty's ability to describe his journey so lyrically, and then his willingness to share his methods, that make this book a gem."

—Abraham Verghese, MD, author of *Cutting for Stone*

"Once in a generation, someone is able to articulate the compelling mystery within his or her life story in such a way that it captures the imagination of others and inspires them to align with what is deepest and best in themselves and allow it to manifest and flower. There is plenty of magic in this book, but the deepest magic of all is that Jim was openheartedly guided to start practicing that aligning when he was twelve, and trusted it enough to never lose the thread completely, even in the hardest of times. Behold what is emerging now."

—Jon Kabat-Zinn, PhD, author of *Full Catastrophe Living*

"True healing is both biological and spiritual. When you experience love and compassion, your body shifts into homeostasis and self-regulation. When you heal yourself, you heal others. The reverse is also true. Your acts of kindness and compassion are the true healing of the world. In this extraordinary book, Dr. James Doty shows you the way."

—Deepak Chopra, MD, coauthor of *Super Brain*

"Jim has written a truly extraordinary book. He shares with us the trauma of his childhood filled with pain, despair, and shame through the gifts of spirit that blazed the path for him to fulfillment, love, and wisdom. Indeed, *Into the Magic Shop* offers each of us this gift. I am in awe of Jim's skill in conveying it through the magic of this book."

—Sharon Salzberg, author of *Real Happiness*

"A compelling narrative that demonstrates the power of compassion to change not only a life but the world. Powerful and moving."

—Chip Conley, author of *Emotional Equations*

"*Into the Magic Shop* is not only a moving testimony that keeps the reader enthralled throughout the book but also a powerful exhortation to live a more compassionate and meaningful life. Beautiful and highly inspiring."

—Matthieu Ricard, author of *Altruism*

"When a top neurosurgeon opens his heart to talk about his own difficult childhood that provided recipes for loneliness, fear, rage, and shame, you know you are in for a deeply moving and insightful journey into the suffering and fragility of the human mind."

Beautifully written, deeply original, this is an extraordinarily moving and exceptionally practical book into the 'magic' tricks for calming and cultivating our minds. Here are lived ways to cope and engage with the realities and struggles of life that we all just find ourselves in. The seeds of compassion are being planted; we must now cultivate them."

—Paul Gilbert, PhD, OBE, author of *The Compassionate Mind*

"*Into the Magic Shop* is a moving and inspiring story of transformation. It provides us lessons about how to live better and more compassionate lives."

—Paul Ekman, PhD, author of *Emotions Revealed*

"Dr. Doty's powerful book is a testament to how faith and compassion extend beyond religion, race, and nationality and can help an individual overcome adversity and personal limitations. It is an inspiration."

—Sri Sri Ravi Shankar, spiritual leader and founder of the Art of Living Foundation

"I can think of no comparable book with such a brilliantly created narrative following the remarkable arc of the author's life: From growing up as a poor, disadvantaged child into a brilliant neurosurgeon and wealthy entrepreneur, Doty's story moves deftly, from using his scalpel to save the lives of his patients to using his compassionate heart to enrich the lives of others. Profound, deeply moving, and emotionally resonating."

—Philip Zimbardo, PhD, author of *The Lucifer Effect*

"*Into the Magic Shop* will literally rewire your brain. It is a candid and personal story about a life transformed by a chance encounter in a magic shop. It is a truly optimistic and inspirational testament to the power of compassion and the ability to overcome adversity and discover your true potential."

—Glenn Beck, nationally syndicated radio host and founder of The Blaze

"This is a story of faith beyond the bounds and barriers of religion. A story of hope in the face of life's great challenges and of magic that opens the doors of potential and healing. *Into the Magic Shop* is the journey of a brain surgeon whose life is marked by success and failure and at all times laced together in a rich fabric of hope, kindness, and compassion. A book that will touch heart, soul, and mind."

—Rev. Dr. Joan Brown Campbell, director emeritus of religion at the Chautauqua Institute and former executive director of the World Council of Churches

"While we don't always get to choose what happens in life, we can choose to cultivate our compassion and wisdom as a result. In his capacity to recognize and accept that life is a tapestry of failures and successes, neurosurgeon James Doty shares the wonder and science of the relationship between head and heart—in all its pain and promise. *Into the Magic Shop* is a compelling journey about a little boy struggling with personal challenges and how the unforeseeable consequence of wandering into a magic shop transforms his life. This book will transform your life as well."

—Lisa Kristine, Lucie Award–winning humanitarian photographer

“Every so often you read a book that you can’t put down until you have read the very last word. *Into the Magic Shop* is such a book. This poignant, redemptive story will take your breath away. It will make you laugh and cry, rattle your mind, break open your heart, and shake your soul as it amuses, enchants, and illuminates. Dr. James Doty, a well-known neurosurgeon, uses the twin scalpels of wisdom and compassion to operate on our consciousness. He is a surgeon of the soul—an atheist who will have you gasping ‘OMG!’ This book is an explosion of grace and enlightenment.”

—Rabbi Irwin Kula, co-president of the National Jewish Center for Leadership and Learning

“Doty’s memoir is as inspiring as it is riveting. In bringing a neurosurgeon’s mind to matters of the heart, he sheds light not only on what matters most in life but also on how to achieve it. As you ride the ups and downs of his life with him, you can’t help but share in the magic.”

—David DeSteno, PhD, author of *The Truth About Trust*

“The magic of Jim’s story, and the insight with which he shares his life with us all, is a great gift, and one which I encourage everyone to receive with open arms. His words, and his letters—*CDEFGHIJKL*—deserve our full attention, our full intention, and the reward is the discovery of the power of opening one’s heart to each other and to the world.”

—Scott Kriens, codirector of the 1440 Foundation and chairman of Juniper Networks

“Dr. Doty’s story is a captivating, archetypal tale spanning desperate heartache to a zenith of privilege and success, then landing in a billow of thoughtful, dedicated tenderness. Touched on the verge of adolescence by a strip mall fairy godmother whose magic wand was selfless, affectionate coaching on inner life and purpose, Jim transcended the common pitfalls of reflexive anxiety and diffidence—and gratuitous wealth—and with grit discovered his own love for and profound commitment to humanity.”

—Emiliana R. Simon-Thomas, PhD, science director of the Greater Good Science Center

“Stanford neurosurgeon James Doty shares with us his difficult childhood and how meeting an extraordinary woman in a magic shop at twelve changed everything. A moving and eloquent story that offers us a path to open our hearts and enlighten our minds.”

—Chade-Meng Tan, author of *Search Inside Yourself*

“The truth is, Jim Doty’s book was not on my reading list. Then I made the mistake of skimming the first page. I was immediately seduced by Jim’s openhearted, undefended honesty in sharing a most compelling and profoundly human story. He takes us along on a mesmerizing journey, from a hardscrabble childhood to the height of human achievement. It is a story rich with inspiration, insights, and life lessons that left me

wishing it would never end. Can reading someone else's life story change your own? Step *Into the Magic Shop* with Jim Doty and you'll find out."

—Neal Rogin, Emmy Award-winning writer and filmmaker, and founding board member of Pachamama Alliance

"An intensely moving and inspiring book—a powerful example of how even when we find ourselves in the most challenging and overwhelming of circumstances, compassion can open our hearts and transform our lives."

—Sogyal Rinpoche, Buddhist monk and author of *The Tibetan Book of Living and Dying*

"Rarely has a book grabbed me so quickly and so deeply—I couldn't put this down. *Into the Magic Shop* shows us the power of living with a compassionate heart and a courageous spirit."

—Marci Shimoff, author of *Happy for No Reason, Love for No Reason, and Chicken Soup for the Woman's Soul*

"*Into the Magic Shop* is a powerful testimony of how, when we choose compassion as a defining part of who we are, magic truly begins to unfold in our lives. A most inspirational book that uplifts our spirits and opens our hearts, at a time when so much of what we hear and read seems to make us lose hope in humanity. Anyone who reads this book will be changed, for the better."

—Thupten Jinpa, PhD, author of *A Fearless Heart*

"*Into the Magic Shop*, by well-known neurosurgeon James Doty, allows us to share his remarkable story of adversity and hardship and how his life trajectory is profoundly affected by a woman in a magic shop. Her lessons change his perception of the world and his place in it, and by doing so demonstrates the power of the mind to change and the power of compassion to heal. An eloquent and powerful memoir that can change your life."

—Tim Ryan, U.S. congressman and author of *A Mindful Nation*

"In this profound and beautiful book, Dr. Doty teaches us with his life, and the lessons he imparts are some of the most important of all: that happiness cannot be without suffering, that compassion is born from understanding our own suffering and the suffering of those around us, and that only when we have compassion in our hearts can we be truly happy."

—Thich Nhat Hanh, author of *Peace Is Every Step*

MAGIC

& NOVELTIES



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Into the Magic Shop

A NEUROSURGEON'S QUEST TO
DISCOVER THE MYSTERIES OF THE BRAIN
AND THE SECRETS OF THE HEART

James R. Doty, MD

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To Ruth and all those like her whose insight and wisdom are given freely.



*To His Holiness the Dalai Lama, who continues to teach me the meaning of
compassion.*

To my wife, Masha, and my children, Jennifer, Sebastian, and Alexander, who every day are an inspiration.

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Acknowledgments

INTRODUCTION: BEAUTIFUL THINGS

There's a certain sound the scalp makes when it's being ripped off of a skull—like a large piece of Velcro tearing away from its source. The sound is loud and angry and just a little bit sad. In medical school they don't have a class that teaches you the sounds and smells of brain surgery. They should. The drone of the heavy drill as it bores through the skull. The bone saw that fills the operating room with the smell of summer sawdust as it carves a line connecting the burr holes made from the drill. The reluctant popping sound the skull makes as it is lifted away from the dura, the thick sac that covers the brain and serves as its last line of defense against the outside world. The scissors slowly slicing through the dura. When the brain is exposed you can see it move in rhythm with every heartbeat, and sometimes it seems that you can hear it moan in protest at its own nakedness and vulnerability—its secrets exposed for all to see under the harsh lights of the operating room.

The boy looks small in the hospital gown and is almost swallowed up by the bed as he's waiting to enter surgery.

"My nana prayed for me. And she prayed for you too."

I hear the boy's mother inhale and exhale loudly at this information, and I know she's trying to be brave for her son. For herself. Maybe even for me. I run my hand through his hair. It is brown and long and fine—still more baby than boy. He tells me he just had a birthday.

"Do you want me to explain again what's going to happen today, Champ, or are you ready?" He likes it when I call him Champ or Buddy.

"I'm going to sleep. You're going to take the Ugly Thing out of my head so it doesn't hurt anymore. Then I see my mommy and nana."

The "Ugly Thing" is a medulloblastoma, the most common malignant brain tumor in children, and is located in the posterior fossa (the base of the skull). *Medulloblastoma* isn't an easy word for an adult to pronounce,

much less a four-year-old, no matter how precocious. Pediatric brain tumors really are ugly things, so I'm OK with the term. Medulloblastomas are misshapen and often grotesque invaders in the exquisite symmetry of the brain. They begin between the two lobes of the cerebellum and grow, ultimately compressing not only the cerebellum but also the brainstem, until finally blocking the pathways that allow the fluid in the brain to circulate. The brain is one of the most beautiful things I have ever seen, and to explore its mysteries and find ways to heal it is a privilege I have never taken for granted.

"You sound ready to me. I'm going to put on my superhero mask and I'll meet you in the bright room."

He smiles up at me. Surgical masks and operating rooms can be scary. Today I will call them superhero masks and bright rooms so he won't be so afraid. The mind is a funny thing, but I'm not about to explain semantics to a four-year-old. Some of the wisest patients and people I have ever met have been children. The heart of a child is wide-open. Children will tell you what scares them, what makes them happy, and what they like about you and what they don't. There is no hidden agenda, and you never have to guess how they *really* feel.

I turn to his mother and grandmother. "Someone from the team will update you as we progress. I anticipate it will be a complete resection. I don't expect any complications." This isn't just surgeon-speak to tell them what they want to hear—my plan is for a clean and efficient surgery to remove the entire tumor, while sending a small slice to the lab to see just how ugly this Ugly Thing is.

I know both Mom and Grandma are scared. I hold each of their hands in turn, trying to reassure them and offer comfort. It's never easy. A little boy's morning headaches have become every parent's worst nightmare. Mom trusts me. Grandma trusts God. I trust my team.

Together we will all try to save this boy's life.

• • •

AFTER the anesthesiologist counts him down to sleep, I place the boy's head in a head frame attached to his skull and then position him prone. I get out the hair clippers. Although the nurse usually preps the surgery site, I prefer to shave the head myself. It is a ritual I do. And as I slowly shave the head, I think of this precious little boy and go over every detail of the surgery in my mind. I cut off the first bit of hair and hand it to the

circulator to put in a small bag for the boy's mother. This is his first haircut, and while it's the last thing on his mom's mind now, I know it will matter to her later. It's a milestone you want to remember. First haircut. First tooth lost. First day of school. First time riding a bike. First brain surgery is never on this list.

I gently cut away the fine light brown strands, hoping my young patient is able to experience each of these firsts. In my mind I can see him smiling with a large gap where his front teeth should be. I see him walking into kindergarten with a backpack that's almost as big as he is slung over one shoulder. I see him riding a bike for the first time—that first thrill of freedom, pedaling feverishly with the wind in his hair. I think of my own children as I continue to clip his hair. The images and scenes of all his firsts are so clear in my mind that I can't imagine any other outcome. I don't want to see a future of hospital visits and cancer treatments and additional surgeries. As a survivor of a childhood brain tumor, he will always have to be monitored, but I refuse to see him in the future as he's been in the past. The nausea and vomiting. The falling down. The waking in the early-morning hours screaming for his mother because the Ugly Thing is compressing his brain and it hurts. There's enough heartbreak in life without adding this to the mix. I continue to gently clip his hair just enough so I can do my work. I make two dots at the base of his skull where we will make our incision, and draw a straight line.

Brain surgery is difficult, but surgery in the posterior fossa is even more so and in a small child excruciatingly difficult. This tumor is large and the work painstakingly slow and precise. Eyes looking through a microscope for hours focused on one thing. As surgeons we are trained to shut down our own bodily responses as we operate. We don't take bathroom breaks. We don't eat. We have been trained to ignore when our backs ache and our muscles cramp. I remember my first time in the operating room assisting a famous surgeon who was known not only for being brilliant but also for being a belligerent and arrogant prima donna when he operated. I was intimidated and nervous, and as I stood next to him in the operating room, sweat began pouring down my face. I was breathing heavily into my mask and my eyeglasses began steaming up. I couldn't see the instruments or even the operating field. I had worked so hard, overcome so much, and now here I was, doing surgery just like I had always imagined, but I couldn't see a thing. Then the unthinkable happened. A large drop of sweat rolled off my face and into the sterile field. He went ballistic. It should have been a highlight of my life, my first time in surgery,

but instead I contaminated the surgical field and was summarily kicked out of the operating room. I have never forgotten that experience.

Today my forehead is cool and my eyesight clear. My pulse is slow and steady. Experience makes the difference, and in my operating room I am not the dictator. Or a belligerent prima donna. Every member of the team is valuable and necessary. Everyone is focused on his or her part. The anesthesiologist monitors the boy's blood pressure and oxygen, his level of consciousness, and the rhythm of his beating heart. The surgical nurse constantly monitors the instruments and supplies, making sure whatever I need is within reach. A large bag is attached to the drapes and hangs below the boy's head collecting blood and irrigation fluid. The bag is attached to a tube connected to a large suction machine and constantly measures the fluids so we know how much blood loss we have at any given moment.

The surgeon assisting me is a senior resident in training and new to the team, but he is just as focused on the blood vessels, and brain tissue, and minutiae of removing this tumor as I am. We can't think about our plans for the next day, or hospital politics, or our children, or our relationship trouble at home. It's a form of hypervigilance, a single-pointed concentration almost like meditation. We train the mind, and the mind trains the body. There's an amazing rhythm and flow when you have a good team—everyone is in sync. Our minds and bodies work together as one coordinated intelligence.

I am removing the last piece of the tumor, which is attached to one of the major draining veins deep in the brain. The posterior fossa venous system is incredibly complex, and my assistant is suctioning fluids as I carefully resect the final remnant of the tumor. He lets his attention wander for a second, and in that second his suction tears the vein, and for the briefest moment everything stops.

Then all hell breaks loose.

The blood from the ripped vein fills the resection cavity, and blood begins to pour out of the wound of this beautiful little boy's head. The anesthesiologist starts yelling that the child's blood pressure is rapidly dropping and he can't keep up with the blood loss. I need to clamp the vein and stop the bleeding, but it has retracted into a pool of blood, and I can't see it. My suction alone can't control the bleeding and my assistant's hand is shaking too much to be of any help.

"He's in full arrest!" the anesthesiologist screams. He has to scramble under the table because this little boy's head is locked in a head frame,

prone, with the back of his head opened up. The anesthesiologist starts compressing the boy's chest while holding his other hand on his back, trying desperately to get his heart to start pumping. Fluids are being poured into the large IV lines. The heart's first and most important job is to pump blood, and this magical pump that makes everything in the body possible has stopped. This four-year-old boy is bleeding to death on the table in front of me. As the anesthesiologist pumps on his chest, the wound continues to fill with blood. We have to stop the bleeding or he will die. The brain consumes 15 percent of the outflow of the heart and can survive only minutes after the heart stops. It needs blood and, more important, the oxygen that is in the blood. We are running out of time before the brain dies—they need each other—the brain and the heart.

I am frantically trying to clamp the vein, but there's no way to see the vessel through all the blood. Although his head is fixed into position, the chest compressions are moving it ever so slightly. The team knows and I know that we are running out of time. The anesthesiologist looks up at me and I see the fear in his eyes. . . . We might lose this child.

Cardiopulmonary resuscitation (CPR) is like trying to clutch-start a car in second gear—it's not very reliable, especially as we are continuing to lose blood. I am working blind, so I open my heart to a possibility beyond reason, beyond skill, and I begin to do what I was taught decades ago, not in residency, not in medical school, but in the back room of a small magic shop in the California desert.

I calm my mind.

I relax my body.

I visualize the retracted vessel. I see it in my mind's eye, folded into this young boy's neurovascular highway. I reach in blindly but knowing that there is more to this life than we can possibly see, and that each of us is capable of doing amazing things far beyond what we think is possible. We control our own fates, and I don't accept that this four-year-old is destined to die today on the operating table.

I reach down into the pool of blood with the open clip, close it, and slowly pull my hand away.

The bleeding stops, and then, as if far away, I hear the slow blip of the heart monitor. It's faint at first. Uneven. But soon it gets stronger and steadier, as all hearts do when they begin to come to life.

I feel my own heartbeat begin to match the rhythm on the monitor.

Later, in post-op, I will give his mother the remnants from his first haircut, and my little buddy will come out of the anesthetic a survivor. He

will be completely normal. In forty-eight hours, he will be talking and even laughing, and I will be able to tell him that the Ugly Thing is gone.