



Science of the Magical: From the Holy Grail to Love Potions to Superpowers

By Matt Kaplan

Download now

Read Online 

Science of the Magical: From the Holy Grail to Love Potions to Superpowers

By Matt Kaplan

From the author of *The Science of Monsters*, this engaging scientific inquiry provides a definitive look into the elements of mystical places and magical objects—from the philosopher’s stone, to love potions to the oracles—from ancient history, mythology, and contemporary culture.

Can migrations of birds foretell our future? Do phases of the moon hold sway over our lives? Are there sacred springs that cure the ill? What is the best way to brew a love potion? How do we create mutant humans who regenerate like Wolverine?

In *Science of the Magical*, noted science journalist Matt Kaplan plumbs the rich, lively, and surprising history of the magical objects, places, and rituals that infuse ancient and contemporary myth. Like Ken Jennings and Mary Roach, Kaplan serves as a friendly armchair guide to the world of the supernatural. From the strengthening powers of Viking mead, to the super soldiers in movies like *Captain America*, Kaplan ranges across cultures and time periods to point out that there is often much more to these enduring magical narratives than mere fantasy. Informative and entertaining, *Science of the Magical* explores our world through the compelling scope of natural and human history and cutting-edge science.

 [Download Science of the Magical: From the Holy Grail to Lov ...pdf](#)

 [Read Online Science of the Magical: From the Holy Grail to L ...pdf](#)

Science of the Magical: From the Holy Grail to Love Potions to Superpowers

By Matt Kaplan

Science of the Magical: From the Holy Grail to Love Potions to Superpowers By Matt Kaplan

From the author of *The Science of Monsters*, this engaging scientific inquiry provides a definitive look into the elements of mystical places and magical objects—from the philosopher's stone, to love potions to the oracles—from ancient history, mythology, and contemporary culture.

Can migrations of birds foretell our future? Do phases of the moon hold sway over our lives? Are there sacred springs that cure the ill? What is the best way to brew a love potion? How do we create mutant humans who regenerate like Wolverine?

In *Science of the Magical*, noted science journalist Matt Kaplan plumbs the rich, lively, and surprising history of the magical objects, places, and rituals that infuse ancient and contemporary myth. Like Ken Jennings and Mary Roach, Kaplan serves as a friendly armchair guide to the world of the supernatural. From the strengthening powers of Viking mead, to the super soldiers in movies like *Captain America*, Kaplan ranges across cultures and time periods to point out that there is often much more to these enduring magical narratives than mere fantasy. Informative and entertaining, *Science of the Magical* explores our world through the compelling scope of natural and human history and cutting-edge science.

Science of the Magical: From the Holy Grail to Love Potions to Superpowers By Matt Kaplan Bibliography

- Sales Rank: #188383 in Books
- Published on: 2015-10-27
- Released on: 2015-10-27
- Original language: English
- Number of items: 1
- Dimensions: 9.00" h x 1.00" w x 6.00" l, .0 pounds
- Binding: Hardcover
- 256 pages

 [Download Science of the Magical: From the Holy Grail to Lov ...pdf](#)

 [Read Online Science of the Magical: From the Holy Grail to L ...pdf](#)

Download and Read Free Online *Science of the Magical: From the Holy Grail to Love Potions to Superpowers* By Matt Kaplan

Editorial Review

Review

"In *Science of the Magical*, Matt Kaplan takes us on a journey spiced with the wonders of myth, history and art, leavened with impeccable research, endlessly fascinating. And the result is both a compelling read and a deeply thoughtful exploration of the world around us and the ways we seek to understand it." (Deborah Blum, author of "The Poisoner's Handbook")

"Today magic is mostly a form of entertainment, but for millennia humans told magical stories to make sense of what they didn't understand. This erudite, witty and highly original book explores the surprising natural phenomena behind dozens of supernatural tales of yore. Kaplan will not only enlighten and charm you, but will also change the way you think about what is science and what is magic." (Daniel E. Lieberman, Professor of Human Evolutionary Biology, Harvard University, author of "The Story of the Human Body: Evolution, Health and Disease")

In *Science of the Magical*, Matt Kaplan shows us the many ways by which magic and science can complement and explain each other. Written in a witty and personal style, Kaplan nimbly explores topics as diverse as berserks, hepatomancy, Methuselah mice, stage magic, superheroes, and sunstones, taking the reader on wide-ranging journeys from Iceland, Turkey, and Yellowstone Park to backstage in Las Vegas in his search for the science behind magic and myths." (Stephen A. Mitchell, Professor of Folklore & Mythology and Scandinavian, Harvard University and author of "Witchcraft and Magic in the Nordic Middle Ages")

"Absorbing and intellectually stimulating, this book is a joy to read and is highly recommended." (*Library Journal STARRED review*)

"A wonderful exploration of the possible. Kaplan takes us on a journey into the myths and magic of days long gone and then looks to make scientific sense of these ancient ideas and practices." (Jeffrey Shaman, Associate Professor of Climatology and Epidemiology, Columbia University)

"*Science of the Magical* is a relevant, fascinating exploration of just how weird the world can be. I tell people about things I read in it at least once a week. In a world of bad news, it's refreshing to pick up a book that is filled with wonder, mystery, and joy, especially when all of that comes steeped in scientific realism and evidence." (Maggie Koerth-Baker, journalist and author of "Before the Lights Go Out: Conquering the Energy Crisis Before it Conquers Us")

"In *Science of the Magical*, Matt Kaplan takes a smart, funny trip through the ancient stories of magic that still have the power to enchant us today. In the process, he also provides a remarkably wide-ranging tour of modern science, from geology to neurobiology. Far from being a glum debunker, Kaplan offers us new experiences of wonder through his investigations. The effect is, dary I say it, magical." (Carl Zimmer, author of "A Planet of Viruses")

"This book reminded me of all the fascination and excitement I felt about the universe and how important it was for me to study life and our place in the world. In short, it made me remember why I became a scientist." (Elizabeth Repasky, Professor of Oncology, Roswell Park Cancer Institute, New York)

"Provocative...A charming romp through the history of science." (*Kirkus Reviews*)

"What do *The Princess Bride*, *The Odyssey*, *Super Mario Brothers*, and *The Book of Exodus* have in common? Answer: Matt Kaplan's ingenious curiosity! Kaplan takes us on a scientific romp through fantasy, magic, and mythology to explain supernatural powers and mythical stories. He brings his questions to experts and to the laboratory to try to determine (to name a few) whether a holy grail protected nobles from poisoning, what you can learn from a liver and why pig livers are not so great for such predictions, and what Adam and Eve really ate to cause such a profound sense of self-awareness (spoiler alert: it's not an apple!). Written in a highly engaging and accessible style, you'll dig for the science behind myths and magic and learn some science and scientific scepticism in the process. And, you'll learn that holy grails probably didn't protect nobles...at least not the grails that he studied! Highly recommended." (Daniel T. Blumstein, Professor and Chair, Department of Ecology and Evolutionary Biology, UCLA)

"Using his wide-ranging background as a science journalist, Matt takes us on a wild ride exploring the science behind things once thought to be beyond explanation! A fascinating read that will force you to re-evaluate your thinking on myths and magic." (Bruce Rideout, Director, Wildlife Disease Laboratories, San Diego Zoo's Institute for Conservation Research)

"Kaplan has skillfully woven together a compelling tapestry of science and culture, drawing threads from ancient wisdom and modern laboratories alike. A must-read for anyone who has wondered why things are or have been so." (Barbara L. Fredrickson, Kenan Distinguished Professor of Psychology and Neuroscience, University of North Carolina at Chapel Hill and author of "Positivity" and "Love 2.0")

"What I have always loved about magic is that brief moment when the impossible seems possible. In this book, those impossibilities are made to seem ever so slightly doable through Matt's impeccable research and endless curiosity. It's a bit of magic itself." (Jason Alexander)

"This book captivates the imagination as Kaplan brings scientific explanations for magical and mythical phenomena. The science is often even more fascinating than the magic — a very entertaining and enlightening read." (Randall Hill, Executive Director, Institute for Creative Technologies, USC)

"Kaplan's *The Science of the Magical* is an insightful and fun tour de force on how magical thinking can arise in even the deepest thinkers. There are dozens of books on how people think irrationally, but no other book explains why we think irrationally as clearly or with as much sensitivity and humanity." (Stephen L. Macknik & Susana Martinez-Conde, authors of "Sleights of Mind: What the Neuroscience of Magic Reveals About Our Everyday Deceptions")

"A compelling read for anyone interested in science, but more importantly, for anyone who has ever wondered about the wizardry and magic of life and all of the wonders of our natural world." (Jay Olshansky, Professor, Division of Epidemiology and Biostatistics, University of Illinois at Chicago)

"Kaplan considers how things that were once the stuff of legends could one day become reality. ...filled with cool cocktail-party tidbits." (*The Atlantic*)

"A sprightly survey of how some myths and rituals anticipated later scientific hypotheses, and of how science itself is now materializing the visions of ancient myth." (*Wall Street Journal*)

About the Author

Matt Kaplan is a science correspondent with *The Economist*. He has also contributed to *National*

Geographic, *New Scientist*, *Nature*, and *The New York Times*. He is the author of the book *The Science of Monsters*. In 2014, Kaplan was awarded a Knight Science Journalism Fellowship which he used to study the sciences at MIT and folklore at Harvard.

Excerpt. © Reprinted by permission. All rights reserved.
Science of the Magical

INTRODUCTION

And some things that should not have been forgotten, were lost. History became legend and legend became myth.

—GALADRIEL, THE FELLOWSHIP OF THE RING

The Egyptian war chariots were fast approaching. With no weapons, few rations, and the scorching desert sun beating down upon them, the situation was looking dire for the fleeing Hebrews. Then things went from bad to worse as they found themselves at the edge of the Red Sea. Capture seemed inevitable. The chariots drew closer; all seemed lost; then it happened. Moses lifted up his staff and called upon God to aid the people in their time of need—and help them God did. The waters parted, the Hebrews ran to safety, and the Egyptians were drowned by the crashing waves as they tried to follow.¹

Told over and over through the generations and depicted in countless works of art, the parting of the Red Sea in Exodus is one of the most gripping supernatural moments in Western mythology. It is also an event that, like the ten plagues, archaeologists, historians, and Bible scholars have relentlessly dissected as they have sought to determine if fragments of fact are nestled among the fiction. Might such a story contain descriptions of natural events like earthquakes, floods, or storms that our ancestors witnessed but could not understand? Yes, but we need not only look to our most ancient myths to find bits of recorded history.

Several years after accidentally being exposed to a high dose of radiation while working at a nuclear power plant, engineer Norton McCoy fathers a son named Hank. As the boy grows, he develops inhumanly long limbs, incredible strength, and apelike hands and feet. Due to his unusual body, he comes to excel at numerous sports at school but quickly meets with discrimination from other students on account of his being different. Hank soon discovers that he carries mutant DNA on account of his father's radiation exposure, and while he is not alone, he is a minority in a world filled with people who both hate and fear him.² He soon changes his name to a more appropriate alias, Beast, and ultimately joins the X-Men to fight for mutant rights.

There is little doubt about what realities the X-Men comics were recording when they were first written in 1963. The Civil Rights Act was only months away from being signed into law by President Lyndon Johnson. The issue of discrimination was on everyone's mind, and the persecution of mutants as a metaphor for this issue was ideal. Yet not just racial tensions were captured by this modern mythology. Science was recorded too.

Mutants were initially called the "children of the atom" for a good reason. The Cuban Missile Crisis, which is depicted in the movie *X-Men: First Class*, took place just a year before the comics were written. Anxiety about the effects of radiation on human biology was at an all-time high and was preserved in the X-Men comic series. The Hulk is much the same, appearing in 1962 and described as the result of gamma radiation dramatically altering Bruce Banner's body. Spider-Man, also created in 1962, similarly gains his powers

after being bitten by an irradiated spider.³

It may seem jarring to throw comic-book superpowers into the same bin as the magical events of Exodus. From an early age most of us are taught to see magical acts performed by gods as somehow different from magical acts performed by mortals. But are they really all that different? Whether we call it divine intervention, a miracle, the supernatural, sorcery, or mutation, all of these things share a core similarity. They present the impossible as real while simultaneously recording information about what people were experiencing at the time these stories were created.

FANTASY FOSSILIZED

We have an insatiable appetite for comprehending the world around us. When we see things that we do not understand, our brains immediately get to work trying to make sense of them. These can be minor matters, such as noticing that you sleep less well at the time of the full moon than you do when it is a crescent. They can also be monumental, such as a nonbreathing and pulseless patient suddenly coming back to life after five minutes of effectively lying dead on the surgery table.

Fascinated and baffled, we find ourselves wondering. Is it really the full moon that is making me sleep so poorly, or is it something that I'm doing at that time that is causing me so much trouble? Was there enough glucose and oxygen stored in that patient's capillaries to keep the brain from suffering permanent damage during those five minutes? Was the person in some sort of deep hibernation and not actually dead? When none of these explanations seem acceptable, we turn to the supernatural. The moon casts a spell upon us. An angel stepped in and guided the departing spirit back to the living world.

One of the most dramatic, and tragic, examples of this phenomenon comes from the world's recent struggle with Ebola. Patient Zero, the first person during the 2013–2014 epidemic to catch the disease, was a little boy named Emile living in the rural village of Meliandou, Guinea. He quickly developed a high fever with vomiting and bloody stools and died. A few days later, his sister caught the disease and passed away as well. Shortly thereafter, Emile's pregnant mother fell ill and started bleeding heavily. Late in the night she suffered a miscarriage and died. Three women from the village came to clean up the mother's blood, and they too perished. Only Emile's father survived. Regional medical clinics were baffled. Locals were terrified. In the wake of all the fear and uncertainty, the people of the village—including the ill—came together to perform rituals that they believed would protect them against the black magic of the curse that had struck their community. These magical rituals were a terrible mistake. Multiple new cases followed the ceremony, and the disease spread like wildfire from there.⁴

The situation for our ancestors was much the same. While many of us today look at the fiercest of thunderstorms and explain the chaos as the result of pressure systems and temperature changes, our ancestors were not equipped with such information. They looked at the lightning bolts, deafening thunder, and devastating hail and came to the only conclusion that they reasonably could: Thor, Baal, or Zeus was angry. Similarly, when our ancestors found the bones of fish and the shells of clams stuck in the rocks of mountains thousands of feet above sea level, it would have been reasonable for them to speculate that there had once been a great flood. Yet it would be wrong to always portray people who lived long ago as the clueless ones. Things have sometimes worked in reverse, with our ancestors understanding the world in a remarkable way that has been lost, or very nearly lost, to the ravages of time.

Legend tells of the Vikings possessing an artifact called the sunstone, which allowed them to successfully navigate the Atlantic Ocean centuries before the invention of the magnetic compass. For decades, historians dismissed the sunstone as mere fantasy, but evidence is now emerging from the fields of physics,

mineralogy, and archaeology that this object actually existed.⁵ Similarly, stories in *The Odyssey* portray the Greeks as aware of plants with powerful medicinal properties. They considered them to be magical herbs and often connected them to fantastic stories of the gods. For centuries such tales were disregarded as nothing more than fictions, but recently a number of scientists and historians have started to think that the Greeks were onto something.⁶

As these examples and the many others in this book suggest, magic can function a bit like a fossil. Just as we can look at the bones of animals that lived long ago and use the evidence to deduce what the past was like, we can look at the magic of our ancestors to hypothesize about what they may have dreamed of and what they might have seen in the world around them. In a sense, Galadriel's words were accurate: history can become legend and legend can become myth.⁷ Nevertheless, it would be wrong to suggest that all magic arises from our struggle to comprehend the complexities of the surrounding world. Sometimes we just imagine amazing things and then try to make them real.

PRACTICAL MAGIC

Guided by beliefs and dreams, we have a natural tendency to try to make magical things happen. I didn't try parting any bodies of water as a child, but on a fair few boring afternoons in elementary school, as a *Star Wars* junkie, I tried to use the Force to move a pencil on my desk just a few inches closer. . . . It never worked. On a more somber note, I vividly remember sitting at my grandmother's grave shortly after her death and desperately wishing I could speak with her one last time. Of course, I am hardly alone.

Every year at Halloween hundreds of people gather at Harry Houdini's former house expecting him to one day find a way to escape death. Hundreds of thousands carry around "lucky" rabbit's feet,II countless millions pray for God to intervene in their lives, and newspapers around the globe still print astrology sections that many take seriously. None of these behaviors are new.

Long ago, people put requests for the gods on lead tablets and tossed these messages into sacred pools, put wax dolls resembling real people into sexually explicit positions to create feelings of lust in targeted individuals, or, my personal favorite, put nails through the hearts of chickens stuffed with hairs from the heads of enemies and left these abominations on doorsteps to cast curses.⁸ Sounds about as divorced from science as you could possibly imagine, and in many cases this stuff was utter nonsense . . . but not always.

Healing rituals in ancient temples involved some techniques that we now know yield health benefits; drinking out of holy grails crafted from specific rocks found in the caves where saints lived may truly have granted a longer life under certain circumstances; and the search for the stone of ever-lasting life, known as the philosopher's stone, led to major findings in what would eventually become chemistry.⁹

To this day, illusions drawn by artists such as Maurits Cornelis (M. C.) Escher and stage performances by modern magicians are helping to guide neuroscientists as they figure out how the human brain makes sense of the complicated world that we live in.¹⁰ So while much magic tiptoes its way into the world of science, a lot of science pushes—or, dare I say it, bulldozes—its way into the world of magic.

Seeing in the dark was once an ability that only cats and sorcerers could wield; now anyone with the right set of goggles can manage it. Reading minds was once the territory of oracles and Charles Xavier, but technology is on the verge of granting us the ability to detect what completely paralyzed patients who have lost motor control of their mouths are thinking. In days long gone, the idea of flying on a carpet or broom was strictly the stuff of fantasy. Now we have individuals, such as Yves Rossy of Switzerland, who dart through the skies via jet-propelled devices similar to the flight system used by Tony Stark in *Iron Man*.

Such developments are not limited merely to the world of engineering. While love potions were once only found in Shakespearean plays and the workshops of witches, we now have a veritable cornucopia of pharmaceuticals that can do everything from messing with sexual arousal to making two people more likely to become friends during an initial encounter. On a more frightening level, while it was once the remit of the Viking god Odin to possess the minds of his followers on the field of battle and transform them into the raging berserker warriors of legend, we are now starting to understand which compounds these men were consuming and have the potential to use them to create biochemically altered soldiers who feel neither pain nor fear. Many ethical issues arise here for sure, but all of these magical transitions into reality raise a much larger question about the nature of magic itself.

Does knowing how something magical works make it into something other than magic? I had no idea when I set out to write this book. I had a long love of all things magical found in our mythology, but as a paleontologist by training and a science journalist by profession, I also had a passion for understanding the realities underlying complex systems. After spending two years poring over the myths, beliefs, and rituals of our ancestors, I was still unsure. The question itself proved cloaked in illusion. If I considered just one or two isolated examples, it seemed deceptively simple to answer. However, the more I pondered the matter, the harder it became to grapple with.

Long ago, when faced with perplexing questions, our ancestors trekked for hundreds of miles to gain wisdom from the great oracle at Delphi. When the FASTEN SEAT BELTS sign illuminated on my flight from London to Las Vegas, I realized that I was on a similar pilgrimage. To truly understand how knowing shaped magic, I needed the help of a magician.

Onstage, Teller may be the silent half of the magic and comedy duo Penn & Teller, but he is hardly silent behind the scenes. He has a sharp philosophical mind, and while he speaks quietly compared to his towering companion, his every word is valuable.

As I asked him about the relationship between knowing and magic, he quoted his magician friend Mike Close as saying, “Magic is the gift of a stone in your shoe. You leave with something that you can’t quite figure out and just can’t stop thinking about.” That seemed to fit perfectly with what I knew of modern stage magicians. Keeping audiences guessing was pivotal to their profession. However, just moments later, Teller added, “To any enlightened dweller of our century, knowing increases wonder. I don’t just think this, I know it. If you believe, you oversimplify in the way a child might initially believe there is no complex evolution of life. That simplification in no way increases your sense of wonder. If, however, you know how life came to be on our planet, the wonder is immense!”

His answers were a riddle worthy of the oracle herself. If magic depended upon a viewer’s not knowing how the magic happened, and if knowing was directly tied to a sense of wonder, was Teller saying that being duped by a trick was not as wondrous as knowing how the trick was done? That couldn’t be right. Could it?

What the answer is, or whether there even is one, will, I hope, become clear as we embark on this exploration of the ways in which magic through the ages has been wielded, crept into our stories, guided our research, and in many cases come to be much more than myth.

I. Just in case you were wondering, it is the full moon and not that shot of espresso you had before dinner. Well, the shot wouldn’t help, but the moon does seem to mess with our sleep patterns. More on that later, though.

II. Incidentally, the ever-vigilant gaze of the rabbit was thought to provide protection against the “evil eye.”

However, rabbit eyeballs don't do too well after a few days on the end of a key chain. In contrast, fluffy feet hold up for years and have the added benefit of retaining cheap pink dyes rather nicely.

Users Review

From reader reviews:

Marcus Laws:

The book Science of the Magical: From the Holy Grail to Love Potions to Superpowers make you feel enjoy for your spare time. You need to use to make your capable much more increase. Book can to be your best friend when you getting stress or having big problem with the subject. If you can make reading through a book Science of the Magical: From the Holy Grail to Love Potions to Superpowers to become your habit, you can get a lot more advantages, like add your current capable, increase your knowledge about many or all subjects. It is possible to know everything if you like open up and read a reserve Science of the Magical: From the Holy Grail to Love Potions to Superpowers. Kinds of book are several. It means that, science e-book or encyclopedia or some others. So , how do you think about this reserve?

Gerard Williams:

Do you considered one of people who can't read satisfying if the sentence chained inside straightway, hold on guys this specific aren't like that. This Science of the Magical: From the Holy Grail to Love Potions to Superpowers book is readable by simply you who hate the perfect word style. You will find the details here are arrange for enjoyable reading experience without leaving also decrease the knowledge that want to offer to you. The writer of Science of the Magical: From the Holy Grail to Love Potions to Superpowers content conveys thinking easily to understand by a lot of people. The printed and e-book are not different in the content material but it just different available as it. So , do you even now thinking Science of the Magical: From the Holy Grail to Love Potions to Superpowers is not loveable to be your top listing reading book?

Mary Mohammad:

Hey guys, do you would like to finds a new book to learn? May be the book with the headline Science of the Magical: From the Holy Grail to Love Potions to Superpowers suitable to you? The actual book was written by well-known writer in this era. The actual book untitled Science of the Magical: From the Holy Grail to Love Potions to Superpowers is one of several books that everyone read now. This kind of book was inspired many men and women in the world. When you read this e-book you will enter the new dimension that you ever know just before. The author explained their strategy in the simple way, consequently all of people can easily to recognise the core of this book. This book will give you a lot of information about this world now. So that you can see the represented of the world with this book.

Virginia White:

The book with title Science of the Magical: From the Holy Grail to Love Potions to Superpowers has a lot of information that you can study it. You can get a lot of gain after read this book. This kind of book exist new understanding the information that exist in this reserve represented the condition of the world now. That is

important to you to find out how the improvement of the world. This kind of book will bring you with new era of the global growth. You can read the e-book on your own smart phone, so you can read the item anywhere you want.

**Download and Read Online Science of the Magical: From the Holy Grail to Love Potions to Superpowers By Matt Kaplan
#C5XO7GWQRJL**

Read Science of the Magical: From the Holy Grail to Love Potions to Superpowers By Matt Kaplan for online ebook

Science of the Magical: From the Holy Grail to Love Potions to Superpowers By Matt Kaplan Free PDF d0wnl0ad, audio books, books to read, good books to read, cheap books, good books, online books, books online, book reviews epub, read books online, books to read online, online library, greatbooks to read, PDF best books to read, top books to read Science of the Magical: From the Holy Grail to Love Potions to Superpowers By Matt Kaplan books to read online.

Online Science of the Magical: From the Holy Grail to Love Potions to Superpowers By Matt Kaplan ebook PDF download

Science of the Magical: From the Holy Grail to Love Potions to Superpowers By Matt Kaplan Doc

Science of the Magical: From the Holy Grail to Love Potions to Superpowers By Matt Kaplan Mobipocket

Science of the Magical: From the Holy Grail to Love Potions to Superpowers By Matt Kaplan EPub

C5XO7GWQRJL: Science of the Magical: From the Holy Grail to Love Potions to Superpowers By Matt Kaplan