THE IMAGINATION GAP

We are going to need to use our imagination to solve the biggest problems facing our world. We know imagination is one of the most powerful tools we have. Kids use it. Many adults have lost it. This book will help all of us to recapture, use and apply our imagination the best way we can.

— Aria Finger, CEO, DoSomething.org

Imagination is one of the greatest gifts we have - the ability to look at something one way and see it completely differently. And yet somehow in the transition to adulthood we often stop using our imagination. This book offers the encouragement and support we need to harness our collective imagination again and use it to change the world.

— Rebecca Wainess, Director, Corporate Citizenship at Kenneth Cole Productions

We have more access to information than in any time in human history. It's tempting to look at all that information to model solutions for the future. In *The Imagination Gap*, Brian Reich challenges that, while we can learn from the past, we must IMAGINE new solutions for the future, we must take risks and find comfort in the fear of the unknown. This book will reprogram your mind to imagine and dream big again.

— Ash Greyson, Founder & Chief Evangelist at Ribbow Media

Imagination is the next big thing, and Brian Reich has given imagination the attention it deserves. He explains why imagination is a critical to our success, in business, education, politics, media, and every other sector, and what it will take to harness our imagination as never before. Ignore this conversation at your own peril.

— Malcolm Netburn, Chairman & CEO, CDS Global (a Hearst Company)

As kids, we are encouraged to have a big imagination. As we get older, we're told not to let our imagination get the best of us. In his new book, *The Imagination Gap*, Brian Reich challenges that notion by reminding us that we need our imagination to make sense of the world, and deal with the challenges we encounter. The stakes are too high to not use our imagination. Reich shows us when and how to unleash our imagination, encourages us all to dream bigger, and challenges us to use the power of imagination to change the world.

— Kari Saratovsky, Principal, Third Plateau Social Impact Strategies

Every day, corporations, social entrepreneurs and nonprofits are doing innovative work to improve the lives of communities around the globe. In doing so, they are utilizing their imaginations and amplification powers to help create the kind of future we all want and deserve. We can all be part of this important work and we can do so by using and applying our own. Brian Reich has given imagination the attention it deserves and provides a well-thought out roadmap to help each of us harness our imagination as never before.

— Susan McPherson - serial connector, cause marketer, angel investor, and corporate responsibility expert (also founder and CEO of McPherson Strategies)

Brian Reich shatters the construct that 'imagination' is merely a creative thinking exercise by reimagining imagination itself for what it truly is: The most powerful tool at our disposal to address the challenges facing our society. In a deeply intellectual and accessible way, Reich explains why imagination is critical to our success – in business, education, politics, and media — and what it will take to help us all unlock the power of our imagination and change the world.

— Darren Grubb, Former Deputy Chief of Staff, U.S. Department of Commerce

No one in the social change sector is better equipped than Brian Reich to offer advice about how think differently about problems we face today. He gives us a method to explore new, big, ambitious ideas, develop new models and the techniques for stretching our imagination.

— Beth Kanter, The Happy Healthy Nonprofit: Strategies for Impact without Burnout

The only way we will be able to truly advance the social causes and missions needed for our communities is to think differently about the challenges and solutions. Doing so can be incredibly intimidating. I hope Imagination Gap becomes a resource for community leaders of all kinds.

— Amy Sample Ward, Executive Director of NTEN

THE IMAGINATION GAP

BY BRIAN REICH



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About the Author

Brian Reich is a strategist and writer for executive leaders at global brands, media companies, startups, nonprofits, and political organizations. His research and views regarding the impact of media and technology on society have been published in *The New* York Times, Fast Company, Fortune, TechCrunch, Stanford Social Innovation Review, Vice, Wired, AdAge, The Chronicle of Philanthropy, and others. He has delivered analysis of digital, media, political, and other trends on NPR and Fox News. Brian is also the author of Shift & Reset: Strategies for Addressing Serious Issues in a Connected Society and Media Rules! Mastering Today's Technology to Connect with and Keep Your Audience. Brian has held senior roles at leading PR, marketing, advertising, digital, and public affairs agencies and was briefing director for Vice President Al Gore in the White House. He serves as an advisor to several nonprofit organizations and startups. He attended the University of Michigan and holds a bachelor's degree in political science from Columbia University. He lives in New York City with his wife, Karen Dahl, and their two children.

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Introduction

The most powerful forces in shaping and motivating people's behaviors and the shape of our society are all products of our imagination. However, even as the challenges and opportunities are greater than ever, we find ourselves using and applying our imagination less and less.

In my previous book, *Media Rules!*, I discussed the growing obsession with technology as a marketing and communications tool. The central argument was that three things — information, experiences, and stuff — have always driven people's decision-making, and that would always be true no matter what advances unfold in media or technology. Information is what fuels how we learn and make sense of our world; experiences are how we interact and form personal connections; and stuff is stuff. Products. The things we keep and wear and drive and more. Regardless of platform, regardless of channel or tool, one or all of these three things will play a critical role when you try to motivate someone to understand an idea or take an action.

When you are working to influence someone, to compel a certain action, the desired outcome falls under the umbrella of impact. The word "impact" is often applied to social good — but it applies much more broadly. Impact happens when you create something new. You have an impact when you change something. One time. Consistently. Sustainably. The impact can be big or small, and can take on all different forms. Some impacts will be obvious while others may be difficult to measure — and in most cases the significance of what happens in the world cannot be

easily quantified. You can have an impact in a single moment, or see it play out over time.

One thing is clear about impact: it doesn't happen in isolation. We are all connected, so anything that happens has implications for everyone. Everything good that happens has the possibility of benefiting everyone, while everything bad affects us all in some ways as well.

In everything we do, personally or professionally, individually or collectively, we should consider the impact. In addition, we should strive to make a big impact in everything we do — to ensure that our ideas spread far and wide, our actions benefit as many people as possible. Unfortunately, that does not happen enough. There is plenty of talk about big goals and changing the world. However, we measure results quarter to quarter and project to projects, and rarely take the time to consider the larger impact. Words like transformation and disruption are used a lot, but the massive impact that seems possible is rarely achieved.

The problem is with our imagination. We aren't using or applying our imagination to the full extent possible. We talk about technology as having the potential to save the world and evolve everything about how we communicate and function as humans. Then we celebrate the efforts that prioritize short-term thinking and increased awareness — refusing to accept that the actual, meaningful, measurable impact on our lives is minimal at best. The problems that we face as a society will not be solved with short-term thinking. The idea of achieving world peace, ending the global refugee crisis, eradicating hunger or curing disease — these are massive challenges that have significant negative consequences, and society is not currently capable of stopping them. But, they aren't beyond the reach of our imagination. Amazing potential advancements in how to solve complex problems are not beyond the reach of our imagination.

Unfortunately, we aren't using or applying our imagination to its fullest. Instead, we are doing what we know. What we have always done — maybe with greater efficiency or scale. We are doing the things we have proven will work to varying degrees,

that are easy to replicate. It is really easy to regurgitate things that we have become comfortable doing. Doing new things is much more difficult. That is where the potential for incredible impact exists — in doing new, ambitious, imaginative things.

The promise of imagination is achieving something that has never been done. Our imagination can help us explore new ways of thinking and operating that can move us well beyond what we are presently doing.

We Aren't Shooting for the Big Stuff

We live in a time of unprecedented possibility. Nevertheless, even though we have greater power to explore and experiment, and a chance to create an entirely different future, too much of our individual and collective focus is on what is happening right now. There are changes and improvements occurring every day, advances in health care that are extending life and media that is pushing people to think critically. However, we aren't creating entirely new ways of doing business. We aren't eradicating diseases. We have become comfortable with the idea that constant movement and incremental change is a sign of impact and progress and that that is enough. We have all but given up on the idea of solving the most complex problems.

We aren't using our imagination. There is a gap between what we think about, the kind of impact we try to have, and what we could conceivably achieve. We have an imagination gap. We are not going to get to have the kind of impact that is possible until we close that gap.

Everybody has an imagination. Everybody is born with an extraordinarily powerful tool to dream up things that nobody else can fully understand or appreciate. Our brain is far and away the most powerful tool that exists with unlimited capacity to generate new and transformative ideas only when it's activated and applied. Not only aren't we using our imagination as we could, we are actively shutting down others' imagination. We have revoked the privilege we have to be imaginative.

Think about what it was like when you were a kid. Take a few minutes to watch how a young child plays, learns, and explores the world around them. You will be in awe of the stories they create, the scenarios they dream up, the adventures their imagination takes them on. They are not trying to impress anyone or worrying about how they fit in. They don't just mimic what they see on television, quote someone who spoke to them, or follow instructions they were given — they also invent entirely original languages, people, and places. Most importantly, they are not being told that what they are doing is wrong. That comes later. Thanks to the power of their imagination, kids operate in a world of their own creation where anything is possible.

Now, think about your own experience. How often do you let your brain go in whatever direction it wants? How many times have you raised your hand in a meeting, or at a brainstorming session, and shared a truly novel idea? How many times have you thought of something wildly different, but kept quiet about it? Have you been told that your question is stupid or off topic, or your idea impossible to achieve? Our imagination is always working, always active — but we have become accustomed to suppressing our imagination, because what it produces doesn't align with others, or seems too big, too complicated, or not "on budget." Every time we are told that our ideas don't have merit, a little part of our imagination goes dark. Our willingness to use and apply imagination diminishes.

The good news is this: you can't kill imagination. The parts of your brain that generate new ideas will always be active. However, the more we suppress our imagination, or shut down others who try to share theirs, the larger the imagination gap becomes.

Permission to Use Your Imagination

You now have permission to use your imagination. You have permission to dream up new things. You have permission to propose ideas that do more than just improve a little on what we already know. You have permission to ask questions that don't

have easily or available answers. In addition, you have permission to use and pursue things that have never been conceived of before, and probably don't seem like they're possible. When you do that, you are using your imagination. When you do that, you will put yourself, and all of us, on a very different track.

Some important things to keep in mind as you move ahead:

- Imagination is not the same thing as creativity. Creativity is a
 wonderfully powerful tool that we can activate to come up
 with messages and drawings and all sorts of stuff. That is a
 way to employ or express our imagination. That is not
 imagination.
- Imagination is not the same as intelligence or experience. You cannot be more or less imaginative than someone else (and you shouldn't believe someone who tells you as much).
 Every single one of us has exactly the same power to use our imagination and the same unlimited potential to put it to work.
- Imagination = a new idea. There are big ideas and small ideas, good ideas and bad ideas. The ways that we define and judge ideas is almost entirely subjective. What distinguishes imagination and differentiates it from everything else is the newness of the idea.
- Imagination isn't a special talent or skill. There is no certificate program you can complete to master using and applying your imagination. There aren't nine steps, or five principles or a certain color LEGO that, when used by everyone, will make them more imaginative. The more you fill your brain with and the more diverse your experiences and inputs the more you feed your imagination. If you try to engineer your thinking or force your brain to produce a specific solution, you will end up curbing your imagination more than anything.
- Imagination is not the same as innovation. Innovation is about solving problems and finding ways to change, improve,

maximize, and optimize everything we do. Imagination is about creating things and ideas that are new — and may lead to innovation. Imagination is not about risk tolerance, or problem solving. Imagination is about going beyond what we know and can conceive is possible.

We can do more to use and apply our imagination, individually and collectively. Start by acknowledging that you have an imagination. Believe that it is amazing. Stop suppressing your imagination, or letting others impact your ability to explore and dream.

Imagination is a natural resource. It is not a thing, a process, or a system. It is not a plan, or a strategy, or a process that you can follow or implement. Imagination is a raw material that we can use for whatever we want. Every single germ of an idea starts with our imagination.

Starting Blocks

- 1) Imagination happens. Let it. I have to stop myself from suggesting ideas or "improvements" to my daughter that might influence the elaborate, interstellar war that is happening throughout our apartment with strategically placed stuffed animals and Magna-Tiles. She doesn't need my help. Nobody should try to force others to use imagination in the same way that they would. Just let it happen. Let it play out. There is so much to learn if you aren't interrupting yourself or others, while they are using their imagination.
- 2) Don't listen to anyone else. Your boss gets to say how many hours you work, decide how much you earn, dictate that you're working on a certain client, and direct you to be in Des Moines tomorrow for a meeting. He or she does not get to tell you that your imagination is good or not good, practical or not practical. Moreover, it is exactly that process our teacher saying that's not how we measure success, our parents saying that's not appropriate behavior it's those things

that slowly have stripped away our permission to use our imagination. In addition, if you think about the people who we revere for being the most imaginative, they're seeing the world in a way that nobody else sees it. They're using their imaginations to create solutions to complex challenges, and in many cases developing new ideas to make life better where the rest of us couldn't even conceive of the possibilities.

- 3) Write it down. Or draw it. Or pull out a recorder and start talking. Take the stupid, crazy ideas that are popping into your head and capture them. Each of those is an ingredient that needs to be kept somewhere besides your brain. Your memory is not there to spin off the good story, your memory is there to take facts and experiences and recall them. So if something new comes out, grab it. You may not know what to do with it now, but it's not going to come out in that exact same way again. So stop and write it down.
- 4) Share it. Don't share your imaginative idea(s) for validation purposes. Don't share them because you want to get hired or impress someone, or so you can show that your imagination is better than someone else's imagination. Share because the little piece of information that comes out of your head has power. That little piece of imagination goes into my head and changes the way my imagination is going to work. Ideas build on each other. That ingredient is going to mix with some other ingredients. If you keep it all to yourself, you may have an incredibly vibrant imagination but you're not going to inspire anyone else. The mornings when my son gets up, and we have a conversation, or play a game with imaginary characters or outcomes, my energy, focus, and my ability to generate new thoughts for the day are greater because I'm part of a shared imagination experience.

Imagination is infectious, and deserves to be shared. You don't need a group to have an imagination. You can't pull a task force together; fill a room with different people who can collectively generate an imaginative idea. But you can share your imagination. Moreover, you should.

5) Embrace your imagination as it is. Don't worry about the practicality of what pops into your head. Don't worry about all the crazy steps that you're going to have to take the idea that your imagination has generated from start to finish. Imagination is not triggered when you force it. Your imagination fires when you're in the shower, because it's the only quiet time that your brain gets during the day. Your imagination flourishes when you spend time in the great outdoors, away from the noise and chaos of everyday life, because you're broken your normal daily routine. It's not because you're in the forest, or you're closer to God, or the weather is nice — it's because you have broken your pattern. And that's the moment at which your imagination has an opportunity to come out again.

Don't go camping to go camping, but if you go camping, listen a little bit closer to your brain, and bring a piece of paper so that you don't forget what you thought of when you saw that animal, or tree, or whatever you do when you camp. I don't camp.

How to Read This Book

The book you are about to read begins with an introduction to imagination and the important role it plays in all aspects of our lives — personally, professionally, and more broadly as a community. Each successive chapter takes on the specific challenges that need to be addressed, from acknowledging and understanding that an imagination gap exists to the steps that need to be considered in order to close the gap.

If we can use and apply our imagination more, our ability to think and act differently and develop new and better ideas will improve. Every one of us has an imagination, and we all can do more to use and apply our imagination. Closing the imagination gap will benefit everyone — government and political organizations, news and media, entertainment, sports, marketers and

advertisers, educational institutions, thought leaders, brands and corporations, nonprofits, foundations, and charities, as well as each of us individuals.

In researching and writing this book, I conducted interviews with more than two-dozen scientists, entrepreneurs, organizational leaders, subject matter experts and practitioners, as well as actors, filmmakers, comedians, inventors, and others whose experiences and insights provide powerful evidence to support the need to close the imagination gap. I have also weaved together media coverage, research, and personal experiences. Moreover, to whatever extent possible, my analysis includes recent events whose outcomes were uncertain as we went to print.

The goal of *The Imagination Gap* is to spark real changes in our behavior. I want you to expand the use of your imagination, and help the people you know, work with, and serve to do the same. More broadly, I believe we can change how individuals and organizations think, operate and communicate, by helping them to close *The Imagination Gap* and unlock the potential that exists (but is not currently being fully realized). To help balance the big thinking with practical insights and actions that anyone can take, each chapter also includes:

- A summary of the critical ideas included in each chapter to help organize and prompt you to think about different ways to use and apply your imagination.
- An "imagination challenge" that encourages you to use and apply your imagination. The challenges include questions, prompts, and directives that will help to take the discussion beyond the pages of the book and into your life and work.

I will also continue to share relevant, timely, compelling, interesting, fun, or other information about using and applying your imagination at www.theimaginationgap.com

I wrote this book to be a resource that you can have on your desk, on your phone, keep next to your bed, or carry around with you in your bag. I hope the book is not only informative and interesting, but also useful and applicable. You can read the book from cover to cover, dog-ear, and highlight different pages and passages. You can also pick out different sections that you find valuable now, and come back later to read (or reread) passages in the future when they seem more applicable. Each person who reads this book will bring his or her own experiences and perspectives to this discussion.

This Book Is Like My Brain

I spend a lot of my time exploring how people get and share information and the role that technology plays in how we spend our time. My work focuses on how to get people to think a certain way, vote, donate, buy something, tell someone, volunteer, read, watch, or listen to anything. My passion is behavior change — getting people to think and act differently than they currently do. I also have a sense of personal responsibility to doing something with a positive and meaningful impact on the world that motivates much of this work and my beliefs.

The stories, interviews, examples, facts, quotes, numbers, personal observations, and more that you find in the pages that follow reflect my curiosity, my work, my relationships, and my perspective on the world. I have written a book that reflects how my brain works, and what my imagination dreams up.

I want you to feel excited about the prospect of having and sharing ideas that other people might not fully understand or appreciate. I want you to feel confident that the ideas that you have, whatever your imagination offers up, has value. With the help of this book, you will be able to take the steps so that the rest of us benefit from your imagination as well.

I also want you to squirm a bit when reading this book because you consider how your individual behaviors could change; you might alter your approach. That's when things will start to look different. That's when the real fun begins. That's when your imagination will be most engaged.

When this happens, when we make imagination something that is expressed, shared, and valued by everyone the way it can and should be, amazing things are going to happen.

You don't have to believe me. Read the book to see for yourself.

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My kids — Henry and Lucy — are the reason I wrote this book. They have incredible, boundless imaginations and helped me to understand the power of using and applying your imagination in ways that no study, interview, client or experiment could ever offer. They inspire me with their ideas and their ambition. They also provided helpful edits and suggestions on the language of the book itself. I hope that they never lose their curiosity and sense of wonder, and I hope that the rest of us do our part to close the imagination gap so that they will be able to use and apply their imaginations to shape the kind of future we all will benefit from. I love you both.

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Thank you to everyone.

What Is Imagination?

•••

This chapter explores the history and science behind imagination and the origins of imagination in ancient philosophy, and highlights how imagination works. When applied purposefully, imagination becomes a powerful force in driving people's creative abilities, decision-making capacity, and willingness to take action.

There is no single or perfect definition of imagination. We know that imagination is the ability to form new images and sensations in the mind. We know that those images and sensations are not the same as what our brain collects and processes through our senses such as when we hear or see something. We each have our own imagination, shaped by what we know and experience, and it exists entirely inside our brain.

Unless we share what our imagination creates, it remains an internal mechanism for each of us to view and process what is happening in the world. The word "imagination" comes from the Latin verb *imaginari* meaning "to picture oneself." Nobody can see your imagination or know that you are using it, unless you choose to unleash it on the world.

Imagination helps us conceive the world, our lives, and interact with people, and life, not as they are but as they could be. Imagination provides a window into the world of what is possible. Imagination can push us to think beyond what we know, where we are comfortable — to the unknown, and toward a future of our own creation.

Without imagination, our progress will always be limited. This is true for everyone: business/brands, political and advocacy groups, governments, media, nonprofit and charitable organizations, schools, families, individuals, — all of us. The imagination allows us to project ourselves beyond our own immediate space and time, by anticipating what dangers exist or trouble we might encounter. Imagination also allows us to envision the future, as individuals and as collectives.

Imagination is about invention and fostering new thinking and novel ideas. By contrast, creativity and innovation are applied in more practical and measurable ways. That distinction is important for many reasons: First, they are different — imagination comes before creativity and innovation, and it feeds those processes. Second, we need to be comfortable generating and pursuing ideas without knowing whether or not those ideas are valuable before they are fully considered. Our imagination helps us to function in the face of uncertainty.

As Hannah Scott, the co-coordinator of the Hungry Minds Lab explained, "Creativity is the production of something new and useful using imagination, so it cannot exist without it. Imagination, however, can exist without creativity because it's the first step in the process." She also noted that we can't equate creative output (a directly observable variable) to imagination, because not all imaginative thinking makes it as far as creative output, and that while we haven't yet developed a full understanding of imagination, we do know that it influences human behavior and is different from person to person. "Any individual difference is worth measuring, in order to help us better understand ourselves."

A Brief History of Imagination

The earliest beliefs about imagination were through the lens of philosophy. It was seen as an intermediary between the real and perceived, what could be touched or otherwise experienced, and what we thought might be possible.

Aristotle, a Greek philosopher, believed the imagination served as a bridge between the images that we take in from the world and the ideas what we generate from inside ourselves. To Aristotle the imagination was constantly involved in our intellectual activity — something that we needed to form any thought or contemplate any idea.

In the 1200s, St. Thomas Aquinas, an Italian philosopher and theologian, also argued that the imagination acted as a mediator between mind and body, but warned that the imagination was a particularly weak part of the mind, and thus susceptible to influence or confusion. He wrote that "Demons are known to work on men's imagination, until everything is other than it is."²

Rene Descartes, the French mathematician and scientist who was considered the father of modern western philosophy, was dismissive of the value of imagination. In the 1600s, he wrote, "This power of imagination which I possess is in no way necessary to my essence ... for although I did not possess it I should still remain the same that I now am." He also wrote of "the misleading judgment that proceeds from the blundering constructions of the imagination."

In 1580, Phillip Sidney argued against criticism and fear among Puritans regarding fantasy saying that imagination had value. He explained, "Poetry is more philosophical than history, as the historian is trapped with facts. The poet uses the facts of the historian, but he makes them more noble by using the imagination in the creative process." Sidney wasn't alone in this conception of imagination either — around the same time, William Blake, the English poet, said, "What is now proved was once only imagined."

Furthermore in the late 1700s, Immanuel Kant, the German philosopher, explained how imagination allows humans to supplement knowledge and shortcut the need for proof. For example, our imagination allows us to reason that even though we can't see all sides of a cube, we can still know that cube has six sides without picking it up to confirm. In other words, our imagination connects what is real and what is not yet real. He acknowledged that,

"the imagination is a powerful agent for creating as it were a second nature out of the material supplied to it by actual nature."

It wasn't until the early 20th century that the discussion around imagination started to take on a more practical tone. Jean-Paul Sartre theorized that imagination must satisfy two requirements: "It must account for the spontaneous discrimination made by the mind between its images and its perceptions; and it must explain the role that images play in the operation of thinking." He argued that imagination differs from perception in that perception receives its objects, whereas imagination intentionally generates them. Imagination, he wrote, "is not an empirical and superadded power of consciousness, it is the whole of consciousness as it realizes its freedom." It is Sartre's explanation of imagination that provides the foundation for our current thinking about imagination.

Imagination is about discovery, invention, and originality. Each of us has a unique imagination, and it can be used to inspire and influence others. Imagination provides us with the opportunity to think about what might be possible rather than just be limited to what we know is real. Our imagination informs our reality, by generating images and ideas of what the world is like, to supplement what we see, hear, and experience directly. And while imagination serves its own function, it also contributes to many other aspects of our lives and how we function as human beings.

Even science, which largely belongs to the domain of logical and analytical thinking, has progressed forward because of human imagination. If you look at the greatest scientific theories and discoveries, you will see that they were spurred by the use of the imagination and intuition. Rationality, logic, and mathematics are later used to verify (or disprove), structure and define conjectures and ideas.

Imagination Is Uniquely Human

Humans love to consider different scenarios. We can tell stories, picture future situations, empathize with others' experiences,

contemplate potential explanations for why something has occurred, plan how to share knowledge or teach skills, and reflect on moral dilemmas. We can do all these things because of our imagination.

Imagination can be playful and fun with no consequence whatsoever other than generating ideas in your head. It can be subversive, convincing you that something is dangerous when it's not. It can make you see things differently and beyond the limitations of your reality. It can help you step beyond your perspective and look at a situation from different angles. It can invoke powerful visions that motivate you to move forward when you are stuck and unable to act.

Take a moment to watch a young child play alone and you will experience firsthand the magic that comes from imagination. Creative thought turns the mundane into a magical experience. It is what turns a simple box into a space shuttle, a laundry basket into a race car, and an evening bath into a deep sea exploration. Stuffed animals become patients as well as superheroes. An empty paper towel roll can be transformed into an outfit, a spy glass or an instrument. Kids do this for enjoyment, but also because it helps them make sense of the world. They learn and experience new things each day, and consider what might happen in the future, all by using their imagination. It is what makes them human.

There is some evidence that this basic capacity to simulate exists in other species. When rats are in a well-known maze, they seem to be able to think ahead and consider their options before making a decision how to proceed. Apes are able to learn and interpret human symbols, learning in much the same way that we seem to as humans. But Jacob Bronowski believes that imagination is what makes humans unique from animals. Bronowski was a Polishborn intellectual who was trained as a mathematician but eventually studied and wrote on the sciences, technology, poetry and the relationship between creativity in the arts and the sciences. In his essay, "The Reach of Imagination," he explained, "The tool that puts the human mind ahead of the animal is imagery." He wrote that humans possess a unique ability to create and remember

images — the most important of which are words. "Animals do not have words, in our sense: there is no specific center for language in the brain of any animal, as there is in the human being." 5

Bronowski concluded that the human imagination depends on a configuration in the brain that has only evolved in the last couple of million years. And while imagination makes it possible for humans to create a future that does not yet exist, and may never come to exist in that form, "By contrast, the lack of symbolic ideas, or their rudimentary poverty, cuts off an animal from the past and the future alike, and imprisons him in the present. Of all the distinctions between man and animal, the characteristic gift which makes us human is the power to work with symbolic images: the gift of imagination."

Just as there is no single, perfect explanation of imagination, there isn't definitive evidence as to how imagination works or doesn't. There is also no way to confirm, one way or another, that animals don't possess imaginations. Arguably, suggesting that some species possess imagination while others do not could be considered evidence of a lack of imagination. And the same line of thinking must be considered when we think about the connection between imagination and faith, or our ability to empathize with other people, or collaborate — topics that will be addressed later in the book.

We also know that imagination contributes to the recall of an experience from our past, and can help us piece together several existing ideas into something new. But, imagination is not about what has already happened. What makes imagination unique, and so compelling, is when we use our imagination we are looking into the future and conceiving of things that aren't real (or aren't real yet).

People use the word imagination in different ways, often without giving real consideration to its meaning. The phrase "I can't imagine …" or the question "Can you imagine …?" is tossed about casually in conversation. People use imagination to describe when they are picturing something in their head, anticipating what could happen at an event they might attend later or how they might feel if X, Y, or Z happened to them. The word imagination is also confused with creativity and innovation.

But our imagination is not only engaged when we are creating art, anticipating danger, or trying to remember something that has occurred (or our version of how something occurred). We all have a unique imagination, and the ability to apply it in a range of different ways. Imagination is a key component of planning, comprehending language, designing, and believing. When a person uses their imagination, the many different parts of our brain are working together, making connections and fueling insights that influence our perception of the world — and potentially changing our behavior.

Eyes Forward

Everyone knows change is difficult, and occasionally painful. We have to force ourselves to try new things, whether implementing a new idea, testing a new piece of technology or engaging with people who aren't a part of our community. Most of us don't do enough or go far enough. So much of our change is incremental. So many of our experiments — attempts to change that we consider bold and exciting — are really just slight variations on common behaviors.

But imagination allows us to conceive of possibilities for the future. Our imagination changes how we make sense of the past and present. Without a new, bold, exciting vision for the future, nothing about our current approaches will change. Without change, there can't be progress.

Major advancements won't happen without real commitment, sacrifice, and hard work — but the most important ingredient is the ambition that comes with ideas that emerge from our imagination. We wouldn't have made it to the moon or invented the Internet if we were satisfied with small improvements on what already existed. Incremental change is important, especially because it can add up to something bigger, but a large shift needs to take place for real progress to happen. The big things don't just happen. We discover and achieve the most compelling, most exciting, new things because we use our imagination to set a new course.

Most people don't spend much time thinking about new things because they aren't rewarded for it. We don't appreciate the contribution that imaginative ideas have on everything else happening in our society. Without imagination, innovation isn't possible. Without imagination, there is no creativity. Without imagination, there won't be any new, groundbreaking developments in science, or medicine, art or music, education or even the simple things about how we live our lives.

You Can't Engineer Imagination

We all are faced with some form of imagination gap. There is some distance between what we are capable of dreaming up and where we spend most of our time focusing our thinking and directing our energy. This is the Imagination Gap. We don't spend enough time or energy considering what is possible beyond what is practical. We focus on solving the problems that exist today, making improvements on what we already know. We undermine our own approaches to creativity, innovation, and the other important contributors to progress by making our goals achievable and our ambitions reasonable.

There are an abundance of books, articles, and gurus explaining the value of innovation and creativity. There are structures, methodologies, and tools that so-called experts offer to help you achieve your desired outcomes. They all take a familiar shape: 5 Steps to a More Innovative Organization; 4 Stages of Creativity; 7 Rules for Being More Creative. The Internet provides a constant flow of ready access to information on any topic we might want to explore. But they all feed the same set of behaviors — trained on improving the lives that we already know and experience. While we may benefit from further optimizing things about how we live and work, that approach will not close the imagination gap.

We also will not close the imagination gap by going offline, rejecting technology, or setting aside designated times to think expansively. There is no schedule for when your imagination is most likely to be engaged and no methodology for forcing it to

happen. The key is to break the pattern. Try new things. Force your brain to shift from one focus to the next so you scramble the signals. And when new and different connections are made, new and different ideas are born.

Imagination as We Experience It

Viktor Frankl, a Jewish psychiatrist, spent three horrific years during World War II living in several of the most notorious Nazi concentration camps. While imprisoned, Frankl realized he had one single freedom left: He had the power to determine his response to the horror unfolding around him. He chose to imagine his wife and the prospect of seeing her again. He chose to imagine himself teaching students after the war about the lessons he had learned. Frankl survived and went on to chronicle his experiences and the wisdom he had drawn from them in his 1946 book, Man's Search for Meaning. In the book he wrote "A human being is a deciding being. Between stimulus and response there is a space. In that space is our power to choose our response. In our response lies our growth and our freedom." The space that Frankl described is in the imagination. We all have that space, whether we actively use it or not, and no matter what we use it for. That space allows us to supplement our actual experiences and to create an alternate reality.

But imagination is not just for the creation of abstract ideas and new thoughts. What we imagine can alter how we perceive the world around us. Specifically, what we imagine hearing can change what we see, and what we imagine seeing can change what we hear. According to a study from the Karolinska Institutet in Sweden, "our imagination of a sound or a shape changes how we perceive the world around us in the same way actually hearing that sound or seeing that shape does". ^{6,7} In other words, if we decide something is real, even with no evidence to back that up, our imagination can convince us that it is real — to us.

Scientists and artists alike have demonstrated how allowing their imaginations the freedom to grow and evolve their thoughts results in outcomes that are very different than what they might already know. Their use of imagination has generated discoveries and creations that have changed the way we all live. Without imagination there wouldn't be books or television, cars, airplanes, space travel, the Internet — and countless other amazing inventions.

While we might not all be scientists and artists, imagination can play a very real and important role in everyday life. As adults we have been forced into a world of responsibility and practicality where paying the bills, and having a job (sometimes which we hate), dictate a lot about how we live and what we are able to experience about the world. By tapping into our imagination, we are able to envision other options, and explore what might be possible.

Similarly, imagination can be used to consider different scenarios that might arise in the future so that you can be prepared. Johanna Schwartz, an award-winning filmmaker who was named one of *Foreign Policy* magazine's "Global Thinkers" for 2016, applies this kind of future scenario planning when preparing a documentary. She explains:

I'm running scenarios constantly in my brain. This could happen, this could happen, that could happen. This guy could say this and if he says this and my next question will be that. I'm constantly creating all of these worlds in my head of what might happen so that I'm mentally prepared. That is how I use my imagination.

Imagination can be used to create anything — a language, a special place, friends, and more. It can be applied in business, education, as part of the arts, or anything else. We can be in the same place and share an experience. We can use the same words or images and share a language. We can cocreate a product or collaborate to solve a problem and the output is a mashup of talents and effort. Our imagination also allows us to connect and appreciate what someone else might be experiencing. But you can't share an imagination. We all have our own experiences and our own imaginations. Our imagination helps us create a version of someone else's reality that we can compare to our own.

Innovation and Imagination Are Different

We're living in a time of unprecedented change. Every week, there are new apps to download, ideas to ponder, products to buy, or trends to embrace. We are also seeing major shifts in global politics, advancements in health, and changes in population — where people live, how they interact, and what that does to our ecosystem. Much of the credit for the change that we are experiencing has been given to technology. Companies like Microsoft, Apple, Google, Amazon, Facebook, and more recently Tesla, Uber, Airbnb, and others are held up as the most dynamic leaders in the push toward the future. Some of that credit for transforming the planet is deserved — the desktop computer, the mobile phone, e-commerce, and eventually things like the driverless car will have a substantial impact on the shape of our existence.

But just how transformative were these creations? All of these exciting improvements to our lives qualify as innovations — necessary and valuable improvements on the way that we had operated in the past. Information is more available and certain luxuries more accessible than ever before. Even the most successful of these ventures are still reaching a relatively small number of people. A little over a billion people use Facebook on a regular basis — but that means more than five times as many do not. Google reports that more than 187 million unique users conduct over 3.5 billion searches each day — but on a planet with more than 7 billion residents, the vast majority are still seeking out information from other sources.

Buoyed by the successes of these companies, their products, and the methodology that they follow, innovation has become one of the most widely embraced concepts of recent history — and not just in the technology sector, or business world — by virtually everyone.

Books about innovation are published weekly. Every organization, regardless of size or industry, has seemingly embraced the idea (or in some cases the need) to innovate. Some of the most powerful innovators in history, ranging from GE to Honda to Google, have connected involvement in innovation initiatives to career development, incentives, and promotion because innovation is what they

expect from their future leaders. There is no part of the global society that is immune to the pressure to innovate.

The thinking goes: if we can only help people to be more creative, then the innovation will flow. With innovation as our driving force, the changes that we can drive will forever change the world. Furthermore, if we can only set the right conditions, anyone can produce ideas and solutions that have the potential to push our world forward. The products of the digital age, and the sharing economy, are certainly compelling. These and countless other innovations offer measurable improvements over the past. They are laudable for all that they have achieved, but ultimately limited in their reach and impact.

Like any other business function or discipline, we can learn a lot from pursuing innovation. We review our efforts, spot where we made critical breakthroughs and where we missed key insights. Finding ways to improve our lives is one of the most important things we can spend our time and resources pursuing. Innovation is a process, a structured approach to doing things differently — accelerating and enabling important changes to occur, and its applicable in all aspects of our lives and society.

I think innovation is great, but I also know it's not enough. There are too many problems that need to be solved and opportunities to get healthier, to develop billion dollar products, to change the way people think or behave that are not going to be achieved through innovation alone. Innovation thrives on small changes. It produces iterations of what we know and what we have determined no longer works, or could work better. These small and subtle innovations make a world of difference.

By contrast, imagination requires our brains to make connections between seemingly unrelated concepts, to produce new and novel ideas. Imagination is about doing things that have never been done before.

Why Is Imagination So Important Now?

The pace of change is so rapid that it is easy to become focused on this approach to innovation, the commitment to small, regular improvements that seemingly result in dramatic changes to our lives. When we focus on those issues, we often lose sight of the big picture. In times of massive change and constant disruption, it is more important than ever that we look further ahead, and consider the larger opportunities that could be available.

We have experienced these periods of major disruption before — and just as now, it was the use of imagination during those times that helped us to shape a future that was so dramatically different than what came before. A few examples:

In the mid-15th century in Mainz, Germany, Johann Gutenberg brought together a number of existing technologies to become the first printer to use moveable metal type in the Western world. The idea of capturing knowledge wasn't original — but the idea of printing books to share with the masses was beyond comprehension at the time. The idea was dismissed as unnecessary. But with the benefit of history, we know that the printing press accelerated the transition from the Middle Ages to the modern world. By facilitating the dissemination of human knowledge through mechanization, the printing press paved the way for the Renaissance, the Reformation, and the Scientific Revolution as well.

Fast forward to the Industrial Revolution and the idea that we could take the labor that was powering so much of the country and scale it. Until the late 1700s, manufacturing was often done in people's homes, using hand tools or simple machines. Then, around 1764, Englishman James Hargreaves invented the spinning jenny ("jenny" was another word for "engine"), a machine that enabled individuals to produce multiple spools of threads simultaneously. That invention began the march toward industrialization, which led to the establishment of modern transportation, communication, and banking systems.

And then came the information age — which is best known for the introduction of the Internet and mobile technology. In 1948, Norbert Wiener, an American mathematician at the Massachusetts Institute of Technology (MIT), published an essay titled "Cybernetics." Two years later, he wrote *The Human Use of Human Beings*. Together, those essays explored the potential of automation and the risks of dehumanization by machines. While

machines had already replaced many human roles and functions across industries, the essays are considered landmark theoretical works that both foreshadowed and influenced the arrival of computing, robotics, and automation — the meshing of man and machine. As *The New York Times* noted "Wiener was not the only forward thinking scientist or mathematician considering the role that computers and robots would play in future society — but the publishing of his essay was a critical part of the evolution of the discussion. It was an important advancement, an incremental innovation in the discussion, that would mark the beginning of the Machine Age".^{8,9}

Welcome to the Imagination Age

As the Industrial Revolution shaped and re-shaped our world in various ways for nearly two centuries, the information age has opened the door to the next great shift in our existence in a quarter of that time. We are now rapidly approaching what could be called The Imagination Age.

Designer and writer Charlie Magee first introduced the terms "imagination age" and "age of imagination" in 1993. In an essay entitled "The Age of Imagination: Coming Soon to a Civilization Near You" he argued that "the most successful groups throughout human history have had one thing in common: when compared to their competition they had the best system of communication". 10 He theorized that the most successful communities throughout history have been those with (a) the highest concentration of people with access to high quality information, (b) greater ability to transform that information into knowledge and action, and (c) freedom to communicate that new knowledge to the other members of their group. Our individual and collective ability to survive and thrive as the world hurdles forward will depend on our ability to extend full access to the tools and privileges to everyone. As Rita J. King, the co-director of Science House, wrote "Cultural transformation is a constant process, and the challenges of modernization can threaten identity, which leads to unrest and

eventually, if left unchecked, to violent conflict. Under such conditions it is tempting to impose homogeneity, which undermines the highly specific systems that encompass the myriad luminosity of the human experience."

King has long advocated for the idea of an "Imagination Age," and tracked its emergence over time. In a 2008 essay entitled "Our Vision for Sustainable Culture in the Imagination Age," she wrote that "Active participants in the Imagination Age are becoming cultural ambassadors by introducing virtual strangers to unfamiliar customs, costumes, traditions, rituals and beliefs, which humanizes foreign cultures, contributes to a sense of belonging to one's own culture and fosters an interdependent perspective on sharing the riches of all systems."

When I interviewed King in June of 2016, she explained how her thinking on the subject has evolved over the years:

I started working with leadership teams around the world and I realized that they all have the same problem regardless of industry: they were really entrenched in industrial era thinking. We were all raised and educated in an industrial era model. In the industrial era, things are tangible and heavy and they make sense. An engine works or it doesn't work. It's a very binary, a loom, a car.

These are all things that work or don't work. A factory. The work day starts and ends in the industrial era. Now we are headed into an era where things are very nebulous and hard to understand. Algorithms, data, these are nebulous concepts. The work day does not start and end. It just bleeds over into life.

We are going from a tangible, heavy, common sense reality in which people moved faster and faster and faster and your output, your profit, was greater if you got people to move faster. It's not like that anymore. But we don't know exactly what comes next. The Imagination Age acts as a bridge between the certainty of the industrial age and the future that hasn't been fully defined yet.

We are still trying to figure out how to get the most out of the technology (and all that is associated with it) that we have available — the Internet, big data, Virtual Reality, the systems, and software that power the sharing economy. We arguably haven't even started to apply those tools in the most interesting and most significantly valuable ways. As Jill Lepore wrote in the New Yorker, "Things you own or use that are now considered to be the product of disruptive innovation include your smartphone and many of its apps, which have disrupted businesses from travel agencies and record stores to mapmaking and taxi dispatch. Much more disruption, we are told, lies ahead." 12

However, Lepore notes the ideas that have fueled so much innovation and disruption in business, and particularly the technology industry, are more difficult to apply in other sectors. "The logic of disruptive innovation is the logic of the startup: establish a team of innovators, set a whiteboard under a blue sky, and never ask them to make a profit, because there needs to be a wall of separation between the people whose job is to come up with the best, smartest, and most creative and important ideas and the people whose job is to make money by selling stuff," she writes. It will not succeed without that clear separation — that wall.

The wall — or as Rita J. King referred to it, that bridge — requires the use of our imagination. What is preventing us from more fully embracing technology and its disruptive potential, not just in business but across all aspects of our lives, is the Imagination Gap. Instead of exploring the boundless possibilities of using technology to advance health or re-invent global politics, the limits of our imagination result in apps that enable a better television viewing experience or on-demand food delivery. So many potentially interesting and important ideas are going unexplored or not even being introduced at all.

A Lack of Imagination Is Learned

In the 1960s, a creative performance researcher named George Land conducted a study of 1600 five-year-olds and 98% of the children scored in the "highly creative" range. Dr. Land re-tested each subject during five-year increments. When the same children were 10-years-old, only 30% scored in the highly creative range. This number dropped to 12% by age 15 and just 2% by age 25. As the children grew into adults they effectively had the creativity trained out of them. In the words of Dr. Land, "non-creative behavior is learned." ¹³

The same is true when it comes to imagination. Macky Alston, the Vice President for Strategy, Engagement, and Media at Auburn Theological Seminary, explained to me how our experiences as we grow up impact our use of imagination:

Grownups are so judged and self-critical, so terrified of losing our jobs and of being ostracized in our social circles, that we do almost anything, post-adolescence, to not rock the boat. We want to conform. We want to be popular. We want to get a raise. We want to get ahead. We watch what works and we replicate it. We try to make changes, big or small. But any kind of innovation often is a product of privilege and the innovators often are the ones who feel like they don't have the same amount to lose that others do, and so they're willing to take those risks. Or they have nothing to lose in another regard where they have been so pushed up against the wall by life that they say, "Fuck it. I will choose life over death because I've tasted death and I don't like it."

We are afraid. We are afraid to be wrong. We are afraid to make people angry. We are afraid to try something different. We are afraid to change. We are afraid of change. And we are afraid to use and apply our imagination — to put our ideas out there to be explored, to commit our dollars or time to explore an idea without a clear, measurable and guaranteed set of outcomes attached. Fear prevents people from doing a lot of things. But our imagination is the single greatest weapon we possess in the fight against thinking that we're inadequate, or unable to make a difference.

Our imagination is what helps us draw the roadmap, build the vehicle, and fuel our movement into the future.

We all believe that change is needed, that there are issues and causes that deserve our attention, areas in our life that could be improved, and products (or whatever you want to call them) that would improve our experiences. We have become too focused on maintaining the status quo, making profit, and optimizing at the expensive of dreaming, inventing and pushing forward.

The Imagination Gap is what is holding us back, preventing us from thinking beyond what we know and can prove — and its long past time that we closed the gap.

Challenge: Make Something Out of Seemingly Nothing

Plastic spoons are more than utensils. They can be glued together, melted, and painted to make gorgeous art projects. Plastic spoons can also be turned into DIY projects for home and garden. Using your imagination, you can create just about anything you want out of a plastic spoon — including a unique and thoughtful gift.

To Do: Find the pile of leftover plastic spoons that you tucked away in your kitchen, garage, basement, or wherever extra things get stored in your home. Put your imagination in overdrive and come up with ways to transform those spoons into something other than plain plastic spoons. Then, give what you made away to someone as a gift.

Challenge: Have a Conversation

In-person conversations are sometimes disregarded as dated or old school. But it's not some vestige of a bygone era. Face-to-face is still the manner in which people prefer to communicate, even with all of the technology available. Meeting in person creates a different kind of sensation than speaking on the phone, exchanging text messages, or responding to posts on Facebook. Your brain engages differently and your imagination is applied in new ways.

To Do: Meet a friend for a cup of coffee. Hang around for a few minutes after dropping your kids off at school. Introduce yourself to the person sitting next to you on the bus to work. Whatever your preferred approach is, make time each day to have a conversation with someone you don't speak with on a regular basis — and do it in person.

NOTES

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