

# WIRED TO CONNECT

The Brain Science of Teams and a New Model  
for Creating Collaboration and Inclusion



**Britt Andreatta, PhD**

*Author of *Leading with Emotional Intelligence*, *The Neuroscience of Learning*, *Leadership Fundamentals*, *Wired to Grow*, and *Wired to Resist**

## Discover the surprising truth about what creates and destroys peak-performing teams.

"In this team-focused era, Andreatta's new model shows how true collaboration lives at the intersection of inclusion, purpose, and trust. Her insights in *Wired to Connect* will give you practical strategies for creating and maintaining high-performing teams."

Aaron Hurst, CEO of Imperative, Author of *The Purpose Economy*

"*Wired to Connect* is an extraordinary book. Solidly grounded in the latest academic research, it manages to be immensely practical at the same time. Managers in every sector will benefit from Andreatta's new model and following her advice, using brain science to everyone's advantage."

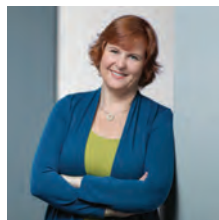
Dr. Amy C. Edmondson, Harvard Business School, Novartis Professor of Leadership and Management, Author of *Teaming: How Organizations Learn, Innovate, and Compete in the Knowledge Economy*

"With a balance of compelling and timely research and practical tools, *Wired to Connect* offers a holistic framework for building great teams and inclusive cultures. Britt's command of today's workplace challenges makes her work a must-read for talent strategists and business leaders."

Dr. Kelly McGill, Culture and Inclusion, Amazon

**T**eams power the majority of work around the world, yet lack of effective collaboration is a leading cause of workplace failure. Dr. Britt Andreatta synthesizes the latest findings from neuroscience and what differentiates high-performing teams from the rest. **Wired to Connect** provides a new understanding of how unconscious bias, inclusion, trust, and purpose impact teams and how you can create the necessary conditions for true collaboration and team excellence. Whether you're a team member or leader, in one building or in different time zones and countries, this book offers a new model and useful strategies you can implement today to consistently create peak-performing teams.

**Dr. Britt Andreatta** is an internationally recognized thought leader who creates brain science-based solutions for today's challenges. She draws on her unique background in leadership, neuroscience, psychology, and education to unlock the best in people and organizations. She has over 25 years of experience consulting with executives from all types of organizations. Learn more at: [www.BrittAndreatta.com](http://www.BrittAndreatta.com).



Business/Leadership  
**\$18.99 U.S.**

ISBN 978-0-9973547-5-1

5 1899



9 780997 354751

 **7th Mind  
Publishing**



# WIRED TO CONNECT

The Brain Science of Teams and a New Model  
for Creating Collaboration and Inclusion

Britt Andreatta, PhD

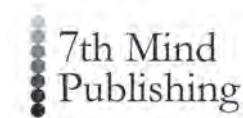
7th Mind  
Publishing

**SAMPLE COPY**  
**Not for Sale**

Copyright © 2018 by Britt Andreatta

All Rights Reserved.

No part of this publication may be reproduced, stored in a retrieval system, or transmitted, in any form or by any means, electronic, mechanical, photocopying, recording, or otherwise, without the written permission of the author.



This edition March 2018.

7th Mind Publishing

Santa Barbara, California

The following are all registered trademarks of 7th Mind, Inc.: Change Quest™, Four Gates to Peak Team Performance™, Three-Phase Model of Learning™, Growth Culture™, Learn Remember Do™, and Survive Belong Become™.

For order or bulk purchases of this book, please write [Orders@7thMindPublishing.com](mailto:Orders@7thMindPublishing.com).

For training materials affiliated with this book, visit [www.Training.BrittAndreatta.com](http://www.Training.BrittAndreatta.com).

For speaking engagements please contact Teresa Fanucchi at [Speaking@BrittAndreatta.com](mailto:Speaking@BrittAndreatta.com), or visit [www.BrittAndreatta.com/speaking](http://www.BrittAndreatta.com/speaking).

ISBN: 978-0-9973547-5-1 (paper)

ISBN: 978-0-9973547-4-4 (ebook)

This book is printed on acid-free paper in the United States of America.

To the amazing Gate 4 teams I have been a part of  
and the leaders who knew how to get us there.

# CONTENTS

Introduction: Finding the I in Team.....	1
<i>Take a Learning Journey</i> .....	4

## I: The Power of Teams Today

1. The Rise of Teams.....	6
2. Teams in Trouble.....	9
3. Understanding Groups .....	13
4. Tuckman Today .....	15
5. Dysfunction Emerges .....	18
6. Collaboration, Coordination, and Cooperation .....	21
<i>Your Learning Journey</i> .....	24

## II: The Brain Science of Groups + Teams

7. The Brain During Good Norming and Performing .....	28
8. Neural Synchrony .....	31
9. Mirror Neurons .....	34
10. Sense of We and the Rhythm of a Team .....	38
11. Team Fractals .....	42
<i>Your Learning Journey</i> .....	44

## III: The Brain Science of Safety + Belonging

12. The Pivot Point.....	46
13. Safety on Teams.....	50
14. The Drive for Belonging.....	55
15. Impact of Age and Media.....	65
<i>Your Learning Journey</i> .....	74

## IV: The Brain Science of Inclusion + Trust

16. Inclusion and Exclusion .....	76
17. Stages of Rejection .....	79
18. Creating Inclusion .....	85
19. Finding True Belonging.....	93
20. The Power of Trust and Purpose.....	96
<i>Your Learning Journey</i> .....	103

## V: A New Model: The Four Gates to Peak Team Performance™

21. A New Team Model.....	106
22. The Four Gates to Peak Team Performance .....	110
23. Journeying through the Gates .....	122
<i>Your Learning Journey</i> .....	125

## VI: Strategies for Executives, Team Leaders + Team Members

24. Creating Gate 4 Teams .....	128
25. Strategies for Senior Leaders and Executives .....	136
26. Strategies for Team Leaders and Managers.....	143
27. Strategies for Team Members.....	152
28. Conclusion: Final Thoughts About Teams .....	160
<i>Synthesize Your Learning Journey into Action</i> .....	161
References + Resources.....	162
Acknowledgments.....	175
About the Author .....	176





## INTRODUCTION: FINDING THE I IN TEAM

*"There is no I in team."*

Vernon Law, baseball player, 1960

Most of us have heard that phrase at some point in our lives. I certainly have—in fact, that quote has sat on my desk in every place I have ever worked. But you know what? It's wrong.

When I started researching the neuroscience of teams, I wasn't aware that I would end up questioning such an iconic belief. But the brain science of what brings out the best in groups points us in a new and surprising direction.

The best teams, the highest-performing ones, create a cohesive unit *through* honoring each member's unique contributions and making them feel included and valued for who they are, as individuals.

It turns out there is an I in team. In fact there are lots of I's. Every team is made up of individuals who bring their own perspectives, skill sets, and experiences. Not only do team environments need to leverage the gifts of those individuals, the group needs to make its members feel safe enough to bring their best work forward. When this is done right, members feel they belong and the group is set up to achieve a rarified state of peak performance, one that is neurologically different from the rest.

Today, teams power the majority of work done in organizations around the world. And every day, they are expected to navigate between coordination, cooperation, and collaboration, each representing different levels of complexity and requiring different skills. But true collaboration requires special conditions, ones that are much more difficult to create than you might think.

My intention for this book is to offer clear steps on how to create those conditions. I know from my consulting work with all kinds of organizations that collaboration is where the real juicy stuff lives. It's also the place of greatest struggle.

This is why teams are perhaps the single most important entity in today's workplace: When we get them right, we leverage so many powerful aspects of human biology that can propel both individuals and the organization forward. But getting it wrong can cripple an organization's ability to compete or succeed.

As with my previous books, *Wired to Connect* was born out of my own experience. As a consultant, I help organizations of all kinds work through a variety of challenges, and team performance certainly tops the list. And of course, I have been a team member and team leader many times throughout my career. Those experiences are the source of some of my greatest professional joys and the most difficult challenges. Now I know why and I am eager to share this knowledge with you.

This book is organized into six sections:

- I. We'll begin by understanding what teams look like in today's organizations along with the difference between collaboration, coordination and cooperation.
- II. Next, we'll dive into the brain science of groups and teams, particularly what sets them up for "good" performance.
- III. We'll also explore the brain science of safety and belonging, two critical factors in the early development of any team.
- IV. Next, we'll examine why inclusion and trust are pivotal for reaching optimal performance.
- V. Then I will introduce you to my new Four Gates to Peak Team Performance model that synthesizes all of the research into an effective tool you can use in any setting.
- VI. We'll end with specific tips and strategies for building successful teams, whether you're a member or its leader.

### *My Research Process*

I have been studying the science of success for over 20 years. All thoughts, beliefs, and behaviors start in the brain and neuroscience offers unique and valuable insights into how we can bring out the best in people and organizations. In my research, I always source validated studies. As someone who completed a PhD at one of the world's top-ranked research universities, I know that rigorous research practices are designed to keep us from being misled or manipulated. The ethical standards for academic research are incredibly high, to protect against the forces of favoritism, politics, and popularity. That is why I look to experienced scientists and research centers that follow the right protocols to ensure their studies are reliable and valid.

I also explore a topic across a wide spectrum of disciplines from neuroscience to psychology and biology to organizational development. This broad view allows me to create models and solutions that are validated from many perspectives and represent the best that the brightest

minds have to offer. All of my sources are listed in the References section at the end of the book.

### *Case Studies*

Throughout the book, you will find fourteen case studies illustrating teams that are either succeeding or struggling. While I love geeking out on scientific studies, it's important to apply those findings outside of the lab to our real, everyday workplace challenges. So, I put out a call for case studies about current teams to gather stories and look at what's working when they go well and what's missing when they go poorly. It allowed me to compare what scientists are seeing in their labs with actual working teams. I received over 50 submissions from all kinds of organizations: small businesses, corporations (including Fortune 500), educational institutions, government agencies, and nonprofits. Submissions came from every industry including health care, technology, finance, manufacturing, media, and retail.

These case studies are shared with permission and written by the submitters, who were either team members or the team's leader. The only editing I did was to fix the occasional typo. Each one brings to life key concepts from the book but, more importantly, I think they demonstrate how common these experiences are. Nearly all of them resonated with me personally because they so closely matched my own experiences with teams. However, these studies represent one person's perspective and may or may not reflect how others saw or experienced the same situation.

You'll find the case studies set apart in boxes with the organization type and size listed. Small organizations have up to 500 employees; medium organizations have 501 to 5,000 employees, and large have more than 5,000 employees. Many organizations are global, operating in regions around the world. This book is written for working people everywhere. Whether you are a team member or the team leader, you'll find useful tips and strategies you can implement today

In addition, I used this research to build new team training programs for leaders, managers, and employees and they are proving to be exceptionally effective in all kinds of organizations and industries. If you want to learn more, visit [www.Training.BrittAndreatta.com](http://www.Training.BrittAndreatta.com).

Let's get started!



## Take a Learning Journey

I have learned that before I can write a book, I have to teach the concepts and content to live audiences. I always try to create a learning experience that shifts people's knowledge and behaviors. Before I wrote this book, I taught this content through workshops and presentations at conferences and corporations. In a live presentation, I model best practices in learning design based on the research of my previous book, *Wired to Grow: Harness the Power of Brain Science to Master Any Skill*. This includes having the audience pause and reflect on content every so often, applying it to their current situation.

Engaging with concepts in a personal way helps the brain learn and retain material and, more importantly, it's where any meaningful shift in actions starts. To help you gain the most from this book, you will find this light bulb icon marking an element called "Your Learning Journey" at the end of each section. Each includes instructions for applying the content to your experiences. I recommend that you use these sections to build your confidence and competence with skills that create team success.

To make this easier, I have created a free downloadable PDF for you to fill out as you explore each concept ([www.BrittAndreatta.com/Wired-to-Connect](http://www.BrittAndreatta.com/Wired-to-Connect)). To maximize your experience, I also recommend you find a partner to share with. Social learning actually boosts long-term retention, and when you work in partnership you both gain the insights of each other's experiences. So ask a friend or colleague who works in a team environment and explore the content together.



## THE BRAIN SCIENCE OF INCLUSION + TRUST

*“If you are not actively working to make your team members feel part of an inclusive, supportive group, then there are a number of ways (many subtle and unintentional) that you may be creating an environment of social exclusion and its resulting negative consequences.”*

Dr. Christine Cox, researcher,  
New York University  
Langone Medical Center

**SAMPLE COPY**  
**Not for Sale**

## 16. Inclusion and Exclusion

We are experiencing an important and much-needed shift in our understanding of what brings out the best in people, thanks to new findings in neuroscience. Our understanding of how people develop thoughts and beliefs about others and how these shape their attitudes and actions is becoming more clear. This is why many companies now offer learning programs on unconscious bias and inclusion.

Biologically, we are wired to assess where we stand in our group: While a young child's brain only sorts for friend or foe, the adolescent brain develops more nuanced capabilities. One study found that as we enter adolescence our brain shifts to prioritize the in-group; this neurological response starts around age ten and launches the beginning of self-consciousness. It is also part of our drive to survive and belong—our body essentially prepares us to leave the nest of our family so we're able to successfully live in our larger community. This is why peer influence becomes so prevalent for tweens and teens. "Peer pressure" is not just a catch phrase; it's the result of our brains sorting for what our in-group thinks, so we can find our place.

From the perspective of our tribal brain, if we are outcast from the group we are likely to perish. Being able to scan for the peer group's values and preferences gives us tools to navigate our communities and increase our chances of being accepted by the group. Our brain has the ability to quickly assess our social status in a group as well as our position in our friendship network. Researchers at Northwestern University found that one of the regions involved, the inferior parietal lobe, is the same part of the brain that tracks numbers and scalar magnitudes. Essentially, the brain keeps a running tally of where we stand in our ranking in the group.

Dr. Rita Tavares, from the Schiller Laboratory of Affective Neurosciences at the Icahn School of Medicine at Mount Sinai, has found that the entorhinal cortex within the hippocampus plays a vital role in how we map our social networks. The entorhinal cortex works as our internal GPS, helping us to build mental maps of physical and social spaces, like our workplaces and neighborhoods. It also creates mental maps of our social networks, in particular noting power and affinity. Our ability to succeed socially depends on these maps helping us navigate complex relationships and power dynamics.

As we enter new social spaces, like jobs or neighborhoods, our brain scans for information and is actually able to map relationships based on power (including hierarchy, dominance, competence) as well as affinity (including trustworthiness, love, intimacy). Functional neuro-imaging scanners (fMRI) show that navigating new social settings activates the hippocampus, proof that the mapping function is taking place.

Our brain is highly tuned to signs that we are being marginalized, or pushed out to the edges rather than being in the middle where we are safest. The amygdala, which is part of the survival/reptilian brain, is the brain structure most active and sensitive to social status. Researchers at John Hopkins and Arizona State Universities have measured increased activity in the amygdala and increased levels of cortisol, the stress hormone, in the bloodstream in relation to where a subject was placed in their friendship network. Dr. Nathan DeWall, a psychologist at the University of Kentucky describes it this way, “Humans have a fundamental need to belong. Just as we have needs for food and water, we also have needs for positive and lasting relationships. This need is deeply rooted in our evolutionary history.”

## **Exclusion Causes Pain**

One of the shocking discoveries I made while researching this book was that exclusion lights up the *same* regions of the brain as *physical pain*. Think about that.

Being excluded registers as pain, as if you’ve been slapped in the face or worse. Perhaps it’s because emotional injury is just as threatening to our survival as a physical injury.

And this isn’t just one random study but a consistent finding by researchers at Harvard, Purdue, Duke, and UCLA, to name a few. As Dr. Kipling Williams, a psychologist at Purdue University states, “Being excluded is painful because it threatens fundamental human needs, such as belonging and self-esteem. Again and again research has found that strong, harmful reactions are possible even when ostracized by a stranger for a short amount of time.” For example, a study he conducted with Dr. Naomi Eisenberg at UCLA found that the same parts of the brain activate for social rejection as do for physical pain (the insula and the dorsal anterior cingulate). Using fMRI machines, the researchers created an experience of mild exclusion by having subjects



play an online game of catch, called cyberball, with two other players. Then the two players excluded the subject and played without him or her. The pain center of the excluded person lit up, creating a new understanding of why exclusion is so uncomfortable for us all.

In a similar study at the University of Michigan, Dr. Ethan Kross gathered subjects who had a romantic partner break things off. He asked them to look at photos of their exes and again found that the same regions lit up as for physical pain.

Another study explored whether this pain reaction could be lessened or mitigated. Subjects were offered money when they were rejected, but not when they were accepted. But the compensation did nothing to change the pain reaction. Dr. Williams also tried his cyberball experiment again, this time testing to see what happened when subjects were rejected by someone they did not like. He used African American students and told them that the people rejecting them were members of the Ku Klux Klan. But even knowing that information did not change the pain reaction in the brain. “No matter how hard you push it, people are hurt by ostracism,” he states.

Researchers have also explored whether social pain can be treated medically, in the same way as physical pain. Pain medications like opioids work in the brain, not by making the pain of a broken arm go away, but by disconnecting the pain receptors in our brain so we don’t feel it. When the drug wears off, the sensation of pain flows again. Over-the-counter medications, like Advil, do the same thing on a smaller scale.

DeWall and Eisenberger partnered to explore the effect of pain medications on social pain by giving subjects an over-the-counter pain medication, acetaminophen, and then measuring their reaction to exclusion on the fMRI. Sure enough, compared to the group with a placebo those who had taken the pain medication had less activity in the pain regions of their brain when they were being rejected.

I suspect that one of the reasons we are experiencing this tragic opioid epidemic in the US is that people go on pain meds for legitimate physical injuries, but find that they also get a respite from their social pain. Once they are physically healed, they can’t quite face the reality of their social pain. And our society does not yet do a good job at helping people talk about that and offer ways to heal from it. In fact, we further reject them and shame them for their drug abuse problems.

## 17. Stages of Rejection

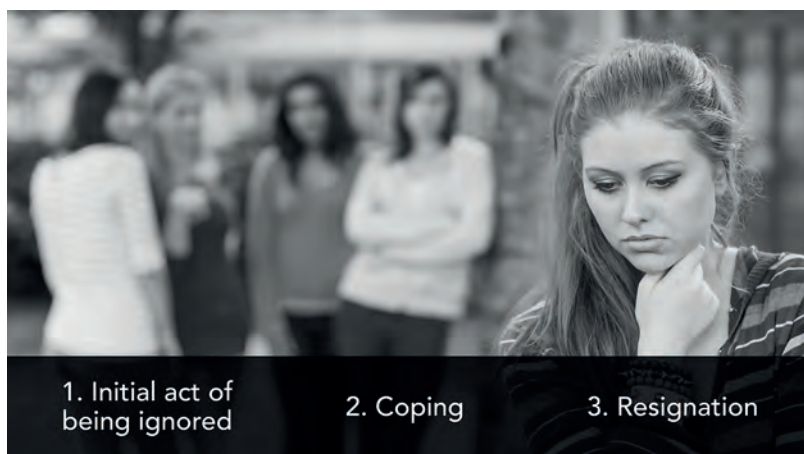
Dr. Williams has done several further studies with Dr. Steve Nida to explore the aftereffects of exclusion. They have found three stages of exclusion or ostracism:

1. Initial act of being ignored
2. Coping
3. Resignation

During the initial act of being ignored, the brain registers the experience as a type of pain. Williams has studied over 5,000 people and has found that even two to three minutes of exclusion creates lingering negative feelings.

Next, in the coping stage they found people tend to have one of two responses to exclusion. Some people try harder to be included, engaging in behaviors designed to help them get re-integrated into the group, such as conforming, complying, and cooperating. “They will pay more attention to social cues and try to be more likable,” Williams says. Picture the familiar scene of a person’s raised hand enthusiastically saying, “Pick me! Pick me!”

But when people feel that there is little hope of re-inclusion, they are likely to seek inclusion elsewhere, essentially rejecting the group that rejected them. Researchers found that the less control people had in their lives, the more likely they were to lash out and be less helpful. Now picture that same hand raised, but with a different kind of gesture as they say, “Screw you!”



*The three stages of rejection*

The third stage is resignation, which happens when exclusion or ostracism occurs over a long time—like at school or work where people have to return every day to an environment where they feel they do not belong.

Another study by DeWall found that people who were suffering from long-term exclusion were less able to perform on difficult tasks, had poor impulse control, poorer sleep quality, and immune systems that did not function as well as their peers who were included. People in this stage experience sadness, anxiety, depression, helplessness, along with feelings of unworthiness. It's no surprise that substance abuse and suicide are common responses. Alcohol and drug abuse, and other addictions, are ways people try to self-medicate to relieve the immediate pain; however, this short-term relief tends to lead to a downward spiral of guilt, shame, and further rejection. As Williams put it, "Long-term ostracism seems to be very devastating. People finally give up."

On the other hand, some sufferers take a different route, becoming increasingly angry. They not only become less helpful, they may become openly hostile and even aggressive. "When a person feels ostracized they feel out of control, and aggressive behavior is one way to restore that control," he says. Aggression at work can take all kinds of forms including criticism, contempt, sarcasm, teasing, and shaming, not to mention physical and emotional intimidation, bullying, harassment, and abuse. I'm struck by how similar this sounds to Gallup's definition of an actively disengaged person at work, "Actively disengaged employees aren't just unhappy at work; they're busy acting out their unhappiness. Every day, these workers undermine what their engaged coworkers accomplish." It can also lead to misusing resources and benefits, like stealing office supplies and misrepresenting vacation hours. No wonder Gallup estimates that disengaged employees cost companies 34 percent of their annual salaries.

So, colleagues who are acting out not only further their own sense of rejection, they may also sow the seeds of exclusion and disengagement in others. A study by Drs. Christine Porath and Christine Pearson, titled *The Cost of Bad Behavior*, found that rude or uncivil behavior on the part of one employee negatively impacts their colleagues in a multitude of ways. Consider these results:

- 80 percent lost work time worrying about the incident
- 78 percent said their commitment to the organization declined

- 66 percent felt their performance declined
- 63 percent lost time avoiding the offender
- 48 percent intentionally decreased their work effort
- 47 percent intentionally decreased time at work
- 38 percent intentionally decreased work quality
- 12 percent left the organization

This is why employee engagement surveys matter, because they can give you valuable data about the health of teams and departments and identify where a domino effect might be in play or about to start as the contagion effect of mirror neurons kick in.

### Case Study: Middle School

*Org Size: Small*

“The goal was to improve student learning by bringing all the teachers in one room to collaborate on various aspects of teaching the subject matter. It was believed that working together, the teachers could use data to create meaningful lessons along with common assessments. We also wanted to insure that an A in one teachers class would be an A in another teacher’s class. We were given literature to read about these Professional Learning Communities (PLCs,) but never really were told how to do them. We were pretty much on our own with no real guidance—the only requirement was that we meet once a week for at least half an hour.

Our team (seventh grade history) consisted of four teachers. I had 12 years of experience and was appointed the lead as my other two teammates had both been teaching less than one year. The fourth teacher had been teaching for 12 years but not in a middle school setting. I believe that some of our team dysfunction was that we were making a lot up as we went along and half of the group didn’t have much experience. Myself and one of the new teachers (‘Jane’) both had strong opinions, which did not align and we expressed disagreement. But the other two members stayed quiet. We didn’t try to listen to each other. As the frustration grew so did the tension in the room. It was not a pleasant experience for all.

Then the two new teachers became good friends and they started resisting anything I suggested. It felt like my experience meant nothing or that I was an ‘old’ teacher so what I knew was no good. Not wanting to rock the boat, I gave in and went along with Jane’s ideas. Little did I know that Jane was telling other people that I was not being a team player and causing tension. This unfortunately became a repeating pattern, I would suggest something in our meetings and Jane would say it was wrong and we couldn’t do it. I then would hear from others that I was once again the source of tension. As the team leader I tried to see if I could maybe work to get things back on track with where they had to be. I would ask if everything was okay with how things were going and if they had any issues they wanted to discuss, but Jane would say nothing. Jane started emailing out meeting agendas to the group, which had been my responsibility. I just gave up trying to be the team lead and handed it off to Jane.

After that, I was going through the motions and I just took the path of least resistance. Why should I try if my opinions are not valued and she’s going to be rude to me? It was difficult to look at her with all that I knew she was saying to others about me. I started to feel like crap about going to the meetings. I would get physically sick. Even now, writing about this situation that occurred six years ago makes me sick to my stomach. This all happened years ago but the hurt still lingers, that’s how much of a struggle it was.”

Williams found that people who respond to long-term exclusion with aggression can also pose a greater threat to their communities, sometimes by escalating into violence. Duke University neuroscientist Dr. Mark Leary analyzed fifteen cases of school shooters and found that thirteen of them (86 percent) suffered from ongoing social rejection.

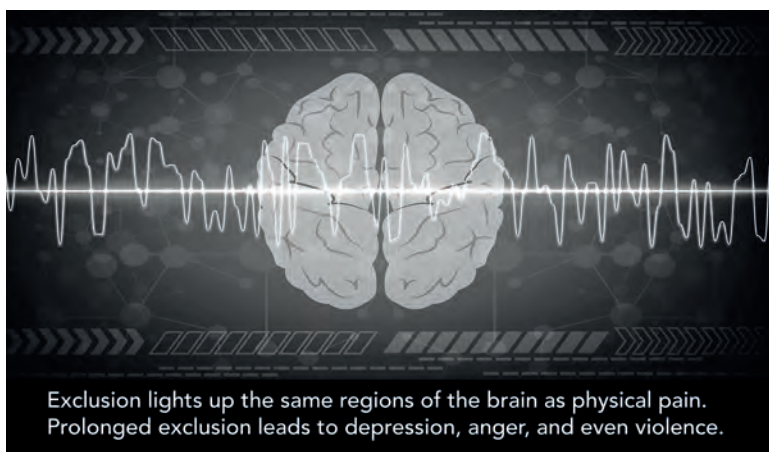
The 2017 mass shooting of concert goers in Las Vegas, Nevada, and church members in Sutherland Spring, Texas, as well as the 2018 school shooting at Douglas high school in Parkland, Florida were all committed by men who had a history of social difficulties, perhaps stemming from mental illness.

The National Safety Council urges that every organization be prepared for workplace violence and the potential of active shooters. They also recommend training for employees on what to do if workplace violence erupts and to look out for these warning signs:

- Excessive use of alcohol or drugs
- Unexplained absenteeism, change in behavior, or decline in job performance
- Depression, withdrawal, or suicidal comments
- Resistance to changes at work or persistent complaining about unfair treatment
- Violation of company policies
- Emotional responses to criticism, mood swings
- Paranoia

Sound familiar? These are the same symptoms of people suffering from long-term exclusion.

Another way that chronic exclusion can impact us all is that extremist groups intentionally prey on the ostracized and rejected. Williams states, “These group provide members with a sense of belonging, self-worth, and control, but they can fuel narrowness, radicalism, and intolerance, and perhaps a propensity toward hostility and violence toward others.” These groups offer immediate relief, often framing the rejecters as the source of the problem and encouraging members to aim their energy at getting even. Dr. Arie Kruglanski, at the University of Maryland who studies violent extremism, says, “There are strong correlations between humiliation and the search for an extremist ideology.”



*The long-term effects of exclusion harm individuals and communities*

Take for example the man who drove a truck down a bike lane in New York City, killing and injuring several cyclists and pedestrians. He stated that he “felt good” about what he had done and asked if he could hang the terrorist group ISIS’s flag in his hospital room.

Naturally concerned, researchers wondered what if anything might mitigate the tendency for excluded people to choose aggression. Dr. DeWall did a couple of experiments where subjects experienced exclusion, from all peers or by everyone but one peer, followed by an opportunity to act aggressively toward the people who excluded them. The people who acted the least aggressively were the subjects who were accepted by just one person. DeWall states, “Even a glimmer of hope for acceptance can make all the difference.”

This glimmer of hope comes in all forms and can even pull people back from a path of aggressive behavior. For example, some police officers in Aarhus, Denmark, have been able to combat the radicalization of youth in their town, who were being targeted by ISIS. They first started hearing about young people disappearing overnight and as they interviewed the parents and community members, they discovered that these Muslim youth were experiencing ongoing rejection and ostracism by their white European neighbors, for both their racial and spiritual differences. The ostracism angered the Muslim youth, making them easy targets for ISIS who promised them a sense of belonging, and as a result, many made the trip to Syria, often disappearing overnight without leaving word with family.

Common practice in most countries was, and is, to declare these people “enemies of the state,” treating them like convicted criminals without a charge or a trial. But Danish officers Thorleif Link and Allan Aarslev knew that further societal rejection would only worsen the problem so instead they offered kindness and a path back to being a member of society. They paired people with mentors, helped them find jobs, and in general, extended empathy and kindness. And the results have been astounding. People who had left for Syria came back, cutting their ties to the group. And when the rest of Europe saw a spike in the radicalization of their youth, Aarhus experienced a significant drop.

Now known as “the Aarhus Model,” it has become a blueprint for fighting radicalization at its very roots. When people expect to be treated harshly but then are given empathy and kindness, the shock of it causes them to rethink and reevaluate their assumptions about who the enemy really is. And by addressing the real root of societal rejection, the model creates inclusion and belonging.



## 18. Creating Inclusion

A sense of belonging matters. We don't need to be popular or liked by everyone but we *do* need to have a sense of belonging somewhere, with someone. This has lots of implications for workplaces today. Employee engagement is not just a measure of work pride and productivity, it's also a valuable indicator of inclusion and exclusion. This is why it's so important that measures of engagement include questions like, "Someone at work cares about me as a person," or "I have a friend at work."

This is also why orientation or onboarding efforts are more effective when companies go beyond the basics of new employment and help people integrate socially into their new community. Did you know that one-third of new hires quit their job within six months of starting it? According to a 2014 study by BambooHR, 17 percent said that a friendly smile or a helpful coworker would have made all the difference. Nearly 10 percent wished for more attention from their manager and coworkers.

A study by the Aberdeen Group found that high-performing organizations are two-and-a-half times more likely than lower-performing ones to assign a mentor or buddy during onboarding. This small and affordable effort helps new hires feel connected, plus their experience is seen by someone who can advise and guide them should they hit challenges.

These findings are not a surprise to me. My entire career has focused on the science of success and my doctoral dissertation studied programs and experiences that help people transition to new environments. As a backdrop, I explored Tinto's Model of Student Integration. Dr. Vincent Tinto studied the factors that contributed to college dropout rates and found that students needed to become integrated, a measure of belonging, in both the academic and social environments of their schools. But belonging is a personal perception. One person could have ten friends and feel completely alone while another could have one friend and feel just fine.

In my study, I found that while students needed to reach a certain level of academic integration in order to not flunk out, the social piece was far more impactful. When students didn't find a sense of belonging socially, they were far more likely to leave college as well as experience depression, anxiety, and suicidal thoughts. It turns out that it doesn't matter how old we are or where we are trying to belong, exclusion is



harmful. As someone who has run onboarding for both small and large organizations, including a multinational company of 10,000 employees, I can tell you the same is true for new hires. The ability to “find your tribe,” even if it’s just a tribe of one, can make all the difference. Again, companies with the best new-hire retention purposefully help their newest members navigate the structural and social elements of a new environment.

**Case Study: Healthcare Organization**

*Org Size: Large*

“I was hired as the Training Supervisor to oversee the seven-person global training team. My charge was to help them develop consistent skills, manage their performance and behaviors, and increase our support of other units within our organization, especially the call centers that initiate house call visits (HCVs), connecting a clinician to a member in their home.

I was mindful of Tuckman’s stages so built the experience to help them work smoothly through each stage in order to build trust with each other and me. We initially had to get to know one another and learn about our personalities and skills while sitting in four different locations around the world. I also had to define their roles and my expectations as a leader of the team so I planned monthly group meetings and weekly one-on-one meetings with each team member. I held two in-person training ‘clinics’ with the team (one to establish/create training processes, and one on delivery techniques and instructional design concepts).

Through these various sessions, we accomplished several things: role definition, learning about each of our backgrounds (skills, experience, etc.), learning each other’s communication styles, understanding how to support and accommodate each other’s needs including our ‘hot buttons,’ and how to best extend common courtesies to each other. We were also working on several key projects together, which helped us become a more tight-knit group.

We achieved and exceeded our goals. We received 90+ requests for training delivery or documentation. We delivered over 500 learning events covering over 50 subjects across the organization; we designed 30+ job aids; and we established 10+

training processes. We helped the call center operators exceed the annual goal of one million scheduled house call visits (usually done by December, it was done by end of September this year!) and their skills improved at all of our locations. We used to be the last thing thought of on a project, but now we get invited to a host of meetings/projects at their inception. This training team received several recognition awards from colleagues and leaders across the organization. In fact, many staff members in other units want to be part of this training team now.”

It’s worth noting again that belonging is not about being universally liked by everyone. In fact, we each have our own perception of how big our tribe needs to be. But research shows that, at work, what matters most to people is feeling they can make a meaningful contribution and that others value their work. From a tribal perspective, this means they’re needed by the group, and therefore, less likely to be ousted. Neurologically, that sense of security is enough to settle the amygdala and allow people to reach higher-order thinking skills like logical analysis and innovation. As we gain more confidence of our position in the group, we perform better. And as we perform better, we gain more confidence.

Some of us find true and deep belonging at work, but most of us really need psychological safety: the ability to make a valuable contribution without fear of being ridiculed or rejected. In addition, we need our colleagues to be more aware of the subtle, and often unintentional ways, they create exclusion through their words and actions. Termed “microaggressions,” these are often brief and casual exchanges that send slights, insults or denigrating messages to others based on some aspect of their identity. They are symptoms of unconscious bias because they often are not intended to hurt others, but do so because of their ubiquity and how they accumulate over time to create exclusion. Dr. Derald Wing Sue, author of *Microaggressions in Everyday Life*, argues that there are three distinct forms of microaggressions:

- **Microinsults** (often unconscious): Actions or comments that convey rudeness or insensitivity and demean a person’s identity. Examples include assuming criminality based on race (e.g., fear of people of color) or assuming intelligence based on gender (e.g., surprise that a woman is a scientist).

- **Microinvalidations** (often unconscious): Actions or comments that exclude or negate the experience, thoughts or feelings of a person's identity. Examples would include assuming that people of color are immigrants or gay people are taking comments "the wrong way" or are "too sensitive."
- **Microassaults** (often conscious): Intent to hurt others through name-calling, avoidant behavior, or purposefully discriminatory actions. Examples include using insulting terms, or intentionally not hiring people based on their identity.

The challenge with microaggressions is that the targeted groups see and feel them keenly (describing them as repeated stabs or pinpricks) while their colleagues don't see or recognize them as such due to their own cultural blinders, driven by unconscious bias. This can make productive conversations difficult because talking about microaggressions can turn in to interactions filled with microinvalidations unless they are artfully facilitated by skilled professionals.

This is why more and more companies are investing in diversity and inclusion programs that help people move through these difficult but important conversations and shift the focus to be about creating inclusion. As Dr. Christine Cox writes, "Instead of trying to avoid exclusion, we are much better off putting thoughtful effort into enhancing inclusion." Dr. Cox is a researcher at New York University's Langone Medical Center and co-authored a paper titled "The Science of Inclusion: How We Can Leverage the Brain to Build Smarter Teams." Companies like Amazon, Johnson & Johnson, AT&T, Kaiser Permanente, Ernst Young, and eBay are all focusing on creating more inclusive workplaces through efforts like employee resource groups (ERGs), networks, learning experiences, conferences, and leadership development programs. In addition, they are making it a performance marker for managers who have clear diversity and inclusion goals that they are accountable to achieve.

## The Role of Empathy

So how do we find our way forward? Through empathy and education. Here is some good news about our brains: We are biologically wired to feel empathy for others as long as we are not in an

us-versus-them relationship. Thanks to our mirror neuron system, we feel their social pain as our own. Dr. Gorgia Silani and other neuroscientists used an fMRI machine to explore social pain and they also found that the physical pain region not only lights up for our own exclusion but also when we watch it happen to someone else, “Our data have shown that in conditions of social pain there is activation of an area traditionally associated with the sensory processing of physical pain. This occurred both when the pain was experienced in first person and when the subject experienced it vicariously.” Christopher Bergland, a writer for *Psychology Today* observes, “From an evolutionary standpoint, these pain responses protect the individual but also fortify social connectivity which protects the collective.”

When we see people as part of our group, we start to neurologically incorporate them into our sense of self. In a study entitled “Familiarity Promotes Blurring of Self and Other in the Neural Representation of Threat,” neuroscientists discovered that we become entwined, on a neural level, with people we perceive in our social network of friends and family. “Our self comes to include the people we feel close to. This likely is because humans need to have friends and allies who they can side with and see as being the same as themselves,” stated Dr. James Coan.

If you think about it, this aspect of our biology is what allows us to live in communities with each other. Our need to belong, to feel pain when we don’t belong, and to experience empathy when we see others in physical or social pain, help us all connect and care for one another in meaningful ways.

Empathy is one of the two core components of psychological safety. Fortunately it can be taught! It is possible, and perhaps should be mandatory, to teach people empathy and other emotional intelligence skills. Even people who are socially challenged, such as people on the autism spectrum, can learn scripts that mimic empathetic responses and when to use them. Well-designed learning events help people develop awareness of and sensitivity to the experiences of others as well as the words and actions that create inclusiveness.

Interestingly, people with a psychopathic personality disorder are known for lacking empathy for others, including lacking remorse when they hurt others, and are often unemotional, callous, and manipulative. Studies at the University of Chicago found that the psychopath’s brain responds differently, making their own experience of social pain more

intense. In addition, their brain does not activate when seeing another's social or physical pain. In fact, instead, the pleasure part of their brain activates, meaning that they enjoy seeing others suffer. So this group can be resistant to, or even incapable of, developing empathy.

## Enhancing Compassion Through Mindfulness

The insular cortex, the brain structure activated by social and physical pain, is made up of two insula, one in each hemisphere, and about the size of a pecan. Studies have shown that the insulae are associated with several functions, including consciousness, emotion, self-awareness, interpersonal connectedness, empathy, and compassion.

New studies are showing that we can alter our insulae through mindfulness. Bergland states in *Psychology Today*, “Neurons in the insula can literally become bulked up and better connected through mindfulness, which can improve the empathetic response of the insula.” Dr. Richard Davidson at the University of Wisconsin-Madison has found that those who practiced compassion meditation for 30 minutes a day, for two weeks, were more compassionate in dealing with others. Other studies have also shown that mindfulness can shift how the brain responds to pain, literally creating relief in how we experience and feel both physical and social pain.

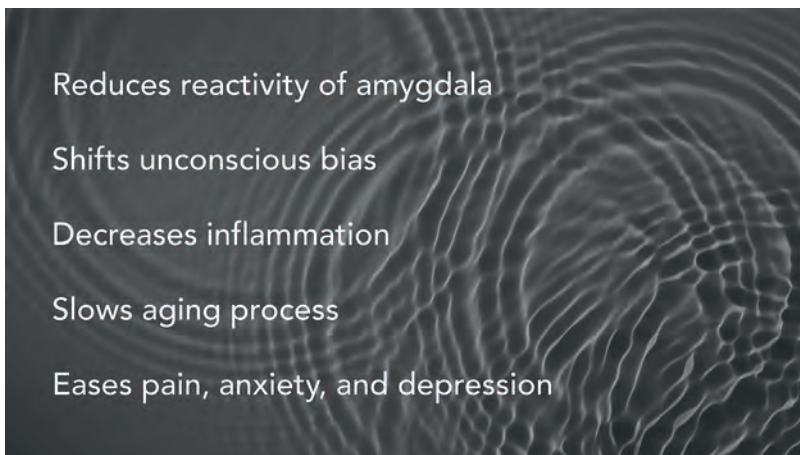
Mindfulness may also make us less anxious and reactive. Scientists at Harvard Medical School found that participants who spent close to 30 minutes a day meditating or practicing some other mindfulness activity changed the composition of their amygdala in as little as eight weeks. Scans showed that the physical composition of their brains showed measurable changes, including decreased gray-matter density in the amygdala, which is known to play an important role in anxiety and stress.

The benefits of mindfulness don't stop there. Dr. Davidson recently coauthored the book *Altered Traits: Science Reveals How Meditation Changes Your Mind, Brain, and Body* with Dr. Daniel Goleman, who's considered the “father” of emotional intelligence. As the following empirical study results highlight, this book should be mandatory reading for all humans:

- The amygdala becomes less reactive in as little as 30 hours of mindfulness, shifting people's baseline reactivity by as much as 50 percent. Practitioners can withstand higher levels of

pain, have better control over their emotions, and recover more quickly from stressors.

- Meditation practices that focus on compassion and loving-kindness can show results in as little as 8 hours. More impressively, Davidson and Goleman state, “Reductions in usually intractable unconscious bias emerge after just 16 hours.” More time yields stronger results.
- Mindfulness immediately quiets the constant internal narrative we have about ourselves—that part of our brain that ruminates about the past and worries about the future. While the effect is an immediate by-product of the practice itself, it can become an enduring state with long-term practice.
- In as little as three-days of mindfulness training, the body reduces its production of pro-inflammatory cytokines, which create inflammation. Extensive practice shifts this to become an enduring physical trait. In as little as three months of an intensive mindfulness practice, the body increases its production of the telomerase enzyme, which slows cellular aging. Yes, you read that right—you can get younger!



*The benefits of a regular mindfulness practice*

- Mindfulness has been shown to reduce a range of mental health challenges including depression, anxiety, and pain—to the same level as prescription medications but without

the side effects. Loving-kindness meditation seems especially effective for people who have experienced trauma and those with post-traumatic stress disorder.

The authors are quick to point out that these effects vary based on the intensity and duration of the practice. They detail studies that involve first-time meditators, quasicregular practitioners, and people who have spent a lifetime of deep devotion to the tradition. One life-long practitioner had spent 62,000 hours meditating—his 41-year-old brain looked like that of a 33-year-old.

While you may not have a goal to embrace an intensive practice, it is clear that we all can stand to gain quite a few positive benefits from beginning a practice and sticking with it. Newbies may see and feel differences in as little as two weeks. This was certainly true for me. I do a light practice using the *21-Day Meditation Experience* by Deepak Chopra and Oprah Winfrey. These ten-minute sessions are organized around a theme and available on a smartphone app, making them the perfect thing for my life. At work, I love to use the short work-related meditations on Desk-Yogi.com. There are many levels and types of mindfulness supports out there, including meditation groups that meet online or in person. And many companies are starting to provide classes and group sessions on a range of mindfulness practices.

Goleman and Davidson found that long-term meditators, who have done 1,000-plus hours, experience more robust benefits, with mindfulness helping them to develop enduring traits rather than a state achieved for a short amount of time. Finally, Davidson's research of yogis' brains (defined as people with more than 27,000 hours of practice) found that they achieve unique brain patterns not seen in other people, particularly in their gamma waves and neural synchrony. This pattern is amplified during meditation but endures throughout the rest of their day. The result seems to be that this slows the aging of their brains, something clearly noticeable on fMRI and EEG scans.



## ACKNOWLEDGMENTS: PRACTICING GRATITUDE

This book on teams is a product of my awesome team: Jenefer Angell (PassionfruitProjects.com) whose skill at editing makes writing books easy and rewarding, Leah Young (Leah-Young.com) who did the book layout in addition to editing my training videos and building my online learning platform (check out [www.Training.BrittAndreatta.com](http://www.Training.BrittAndreatta.com)), Claudia Arnett (BeTheMarket.com) handled all the story submissions and references in addition to managing my social media channels, and Teresa Fanucchi, who coordinates my speaking schedule and kept me organized when I took on way too many projects.

A special shout out to my fabulous colleagues who brought their expertise to reviewing the book: Linda Croyle (diversity and leadership; Croyle-Consulting.com), Kelly McGill (bias and inclusion; [Linkedin.com/in/kellymcgill](https://www.linkedin.com/in/kellymcgill)), and Lisa Slavid (innovation and leadership; [LisaSlavid.com](http://LisaSlavid.com)). A huge thank you to all the people who submitted case studies. This book is better for your sharing.

My gratitude also goes to the teams of neuroscientists and researchers who shared their work with me. Your insatiable curiosity and willingness to dig deeper benefit us all. A special thanks to the team at Deloitte and Ron Stevens for giving me permission to use their graphic images.

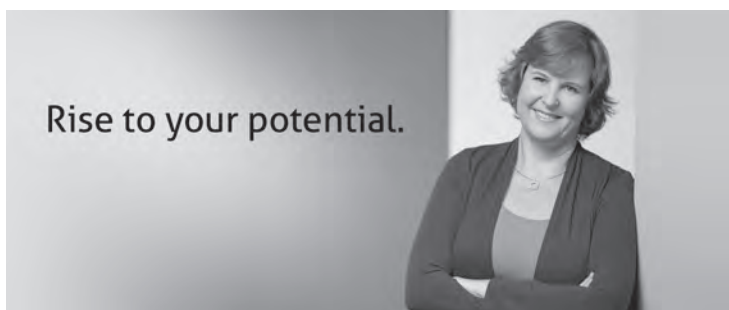
I'd also like to thank my home team: my wonderful husband Chris who keeps me going with hot tea and backrubs. My daughter Kiana who makes me laugh every day and who shares my love of colorful pens and highlighters. My soul kitties, Cody and Ellie, who sit on my keyboard every day, often adding unexpected edits to my manuscript. And to Pascal, the newest edition to our family. Who knew that chameleons were so cool? He spent many a day looking over my shoulder from his tree and reminding me that, yes, the reptilian brain is different very from the mammalian brain. And of course, my family and friends who put up with me through my hours of research and writing: Lisa, Pema, Dana, Elaine, Mike, Barbara, Roger, Kendra, and Carole.

Finally, to my tribe of leadership and learning professionals who work hard to bring out the best in their people and organizations. I am honored to share this important work with you.

I love teaming with you!



## ABOUT THE AUTHOR



Dr. Britt Andreatta is an internationally recognized thought leader who creates brain science–based solutions for today’s challenges. As CEO and President of 7th Mind, Inc., Britt Andreatta draws on her unique background in leadership, neuroscience, psychology, and learning to unlock the best in people and organizations.

Britt has published several titles including *Wired to Connect: The Brain Science of Teams and a New Model for Creating Collaboration and Inclusion*, *Wired to Grow: Harness the Power of Brain Science to Master Any Skill* and *Wired to Resist: The Brain Science of Why Change Fails and a New Model for Driving Success*. Upcoming books focus on the neuroscience of purpose and the conscious evolution of organizations.

Formerly Chief Learning Officer for Lynda.com and Senior Learning Consultant for Global Leadership and Talent Development at LinkedIn, Britt is a seasoned professional with more than 25 years of experience. She regularly consults with businesses, universities, and non-profit organizations on leadership development and learning strategy. Corporate clients include Fortune 100 companies like Comcast and Apple, and also Ernst & Young, Microsoft, Domino’s, LinkedIn, Franklin Covey, TransUnion, Avvo, Rust-Oleum, Alter Eco Foods, and Zillow.

Dr. Andreatta has worked with major educational institutions like the University of California, Dartmouth University, and the University of New Mexico, and nonprofit organizations like the YMCA and Prison Fellowship’s Warden Exchange Program. Dr. Andreatta has served as professor and dean at the University of California, Antioch University, and several graduate schools.

She has received over ten million views worldwide of her courses on Lynda.com and LinkedIn Learning. Other titles include *The Neuroscience of Learning*, *Creating a Culture of Learning*, *Organizational Learning* &

*Development, Leading Change, Having Difficult Conversations, and Leading with Emotional Intelligence.*

A highly sought-after and engaging speaker, Britt delivered a TEDx talk called “How Your Past Hijacks Your Future.” She regularly speaks at corporate events and international conferences, receiving rave reviews like “best speaker of the conference” and “best keynote I’ve ever heard.”

Britt’s industry accolades include several prestigious awards, such as the 2016 Global Training & Development Leadership Award from the World Training & Development Congress. She won the Gold Medal for *Chief Learning Officer* magazine’s Trailblazer Award, and was also nominated for the CLO Strategy Award for her work in designing a performance management program based on growth mindset principles. *Talent Development* magazine identified her as an “outstanding thought leader and pioneer” featured in the June 2017 issue.

Dr. Andreatta regularly consults with executives and organizations on how to maximize their full potential. To learn more, visit her website and social channels:

Website: [www.BrittAndreatta.com](http://www.BrittAndreatta.com)

LinkedIn: [www.linkedin.com/in/brittandreatta/](http://www.linkedin.com/in/brittandreatta/)

Twitter: [@BrittAndreatta](https://twitter.com/BrittAndreatta)

## Take These Ideas Beyond the Page

Bring the Four Gates to Peak Team Performance™ model to your organization. Britt Andreatta has created a range of engaging and robust training materials to help every team and organization reach peak performance. Become a certified trainer or take the online ecourse. Learn more at:

**[www.BrittAndreatta.com/Training](http://www.BrittAndreatta.com/Training)**

## TRAINING PRODUCTS

The Change Quest™ Model training teaches vital skills for anyone leading or going through change. Become a certified trainer or take the individual ecourse for managers and employees.



The Four Gates to Peak Team Performance™ training focuses on how to consistently create high-performing teams. Discover the secrets of collaboration and why inclusion is vital. Become a certified trainer.



Materials include hands-on activities that drive real behavior change, videos of Britt teaching the content, content for a range of audiences, and a copy of the related book (*Wired to Resist* or *Wired to Connect*). Online and self-paced. More topics coming soon. Learn more at:

**[www.BrittAndreatta.com/Training](http://www.BrittAndreatta.com/Training)**

## PRAISE

“You were not only the best keynote we have had for this annual conference, you were the best keynote I have seen, EVER.”

Mark Walker, Board Member, Technology Affinity Group

“Britt taught her unique science-based approach to change management. The material was easily understandable and thought-provoking; it allowed participants to immediately apply the lessons and framework to how they lead change and initiatives. Top managers from a variety of offices found it extremely valuable.”

Lisa Slavid, Organization and Performance Management,  
University of California, Santa Barbara

“I’ve done the ‘required’ management and leadership training at a number of companies from small startups to giants in the enterprise space—including Microsoft and Cisco—and, without a doubt, the training that Britt has done for us at Avvo has been the most engaging and useful of all. The way she combines scientific research, first-hand experience, and practical advice has been incredibly valuable.”

Tim Ahlers, Director of Product Management, Avvo

“The top two sessions were Britt Andreatta and Barack Obama” + “Your research/presentations are THE BEST! Thank you for pouring your passion and curiosity into your work and sharing it with us.”

Attendees, Association for Talent Development’s (ATD)  
International Conference and Expo 2018

“Britt, sending a ton of thanks for your support of the Leader meeting last week—a TERRIFIC experience. The talk you gave spirited people in such a positive way AND your delivery was flawless. Thank you for helping us to get our leaders into the “think differently” space. Loved it!”

Martha Soehren, Chief Talent Officer and SVP, Comcast

“When a company has a major culture shift, you can rarely look to one person. Britt was an exception to this. What looked like company-wide management training became the foundation for the conversations, relationships, and plans to positively impact the culture. She was the rock star in the organization making sure the culture was solid.”

Hilary Miller Headlee, VP of Global Sales, Alteryx

“You have powerful influence in our field and a whole generation of Learning & Development professionals is hungry for your message. People are better because of what you do.”

Cory Kreeck, Executive Director for Training and  
Development, Beachbody

