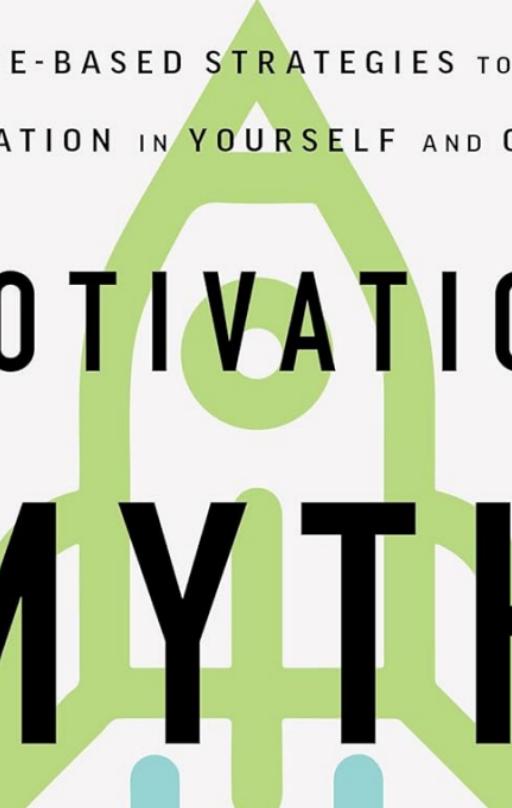


SCIENCE-BASED STRATEGIES TO BOOST
MOTIVATION IN YOURSELF AND OTHERS



MOTIVATION MYTH BUSTERS

WENDY S. GROLNICK, PHD

BENJAMIN C. HEDDY, PHD

FRANK C. WORRELL, PHD

INTRODUCTION

TEN MYTHS ABOUT MOTIVATION AND THE SCIENCE THAT BUSTS THEM

Problems in motivation surround us every day. You may have asked yourself, Why can't I get myself to the gym after I've spent so much on a membership? How come my kids leave their things around the house when it would be just as easy to bring them upstairs? What can I do to get my partner to finish that half-painted wall in the dining room? And if you're like us, you've tried countless ways to change motivation in yourself and others. Perhaps you've visualized yourself doing that 100th sit-up or offered a reward to the kids for doing their chores, or threatened to call an expensive painter. Perhaps these strategies worked, but most likely they did not.

What if the problem is that we've been thinking about motivation in the wrong way? After all, most of us have not taken a course in motivation. And if this is so, perhaps we can change our misconceptions in ways that will enable us to be more productive and happier, and to form more positive relationships with those around us. Many of us believe scientifically unsupported ideas that are holding us back. Replacing these ideas with scientific principles can help get us unstuck and begin working to reach our goals. That is what this book is about. But first, let's think through what we know about motivation.

WHAT IS MOTIVATION?

Motivation is a household word. We use it as a descriptor (*He's just not a motivated person*), a command (*Get some motivation!*), and a way of approaching people (*How are you motivating your sales force?*). How do scientists define motivation, and how do they study it? For scientists, motivation is a two-part concept. First, *motivation is the energy that people put toward an endeavor*. Second, *motivation is where that energy is directed* (Deci & Ryan, 1985).

Misconceptions about motivation can lead us to incorrect beliefs about how motivation works. For example, there is a difference between trying to motivate people and trying to persuade them. Persuasion involves pressure from without and pushes to try to make someone behave. Motivation, by definition, comes from within the people who are acting. Because motivation comes from within, you can't motivate someone—you can only set the conditions that make it most likely they will be motivated.

Let's take the example of Sara. When she comes downstairs in the morning wondering whether she should exercise, her husband goes into "directive" mode: "You really should exercise, you'll feel better. Come on, get going!"

"I know he is trying to help," Sara says, "but he makes me feel pressured and kind of like doing the opposite."

Rather than pushing and persuading, motivating might mean helping Sara figure out what she wants to do or asking what support she would need to feel comfortable exercising ("I'll do the dishes so you have time to exercise!"). Said in another way, rather than persuading, to motivate ourselves or others optimally, we need to learn how to tap into their inner motivational resources.

TAPPING INTO MOTIVATION

So how do we encourage people to want to do something? Researchers have shown that tapping into people's inner motivational resources can promote motivation. Inner motivational resources include people's values, needs, interests, goals, and relationships. Recognizing how a task relates to these resources can increase motivation to engage in the activity.

My (Ben's) daughter is a very talented soccer player. A parent came up to me after a game and said, "I can't wait to see her play on TV one day!" More important, though, she has a blast out there. She just loves soccer. However, one day after practice, she told me that she was bored with soccer and didn't want to play anymore. Now of course, I wouldn't make her play a sport that she wasn't interested in, but she is very talented and was having fun a few weeks earlier. What changed?

I tried several tactics to persuade her to keep playing soccer. She might be the next Mia Hamm or Megan Rapinoe, I thought, I can't let her quit. First, I tried to offer her rewards. We came to an agreement that I would buy her a Dairy Queen Blizzard after every game. Who doesn't love candy mixed up into ice cream? This strategy worked for two games. By the next weekend, she didn't want a Blizzard anymore. In her mind, playing soccer was no longer worth the reward of the Blizzard. The reward plan backfired.

When rewards were ineffective, I tried another strategy. Maybe I could focus on her talent. I could explain to her how great she is at soccer. I told her she has great ability. And with great ability comes great responsibility to develop her talent. That line worked for Spider-Man, why shouldn't it work for soccer-girl? However, telling someone they are talented doesn't always increase motivation, as you will read in Chapter 9. In fact, after I told her how talented she was, she had a tough game. She didn't score any goals. And because

Motivation Myth Busters

I made it all about talent, in her mind, she figured that maybe she wasn't so talented, since she had a rough game. Telling people they have ability can backfire if they fail and attribute it to lack of ability. Again, my plan to persuade her failed.

I decided to take a new approach. My new plan was to ask her what was up. Why are you having negative feelings about soccer? Turns out, asking and listening can turn up some useful information. Go figure.

I did some probing and found out she felt like she didn't have any choice about whether she played soccer. We made her play all year round, and she wanted to try other sports. We thought she was really good, and we were trying to have her practice as much as possible so she could develop her skills. Unfortunately, by removing her choice about whether and to what extent she played soccer, we were killing her motivation for the sport.

We decided on a new strategy. We allowed her to try some other sports and let her play soccer during only one of the seasons. Furthermore, we let her choose whether she wanted to play in the recreational soccer league or on the travel club team. After taking a season off from soccer and joining again in the fall, her motivation increased. She chose to play in the recreational league with her friends. Suddenly, she loved soccer again. She couldn't get enough. Maybe she would be the next big star, or maybe not. Either way, she was feeling energized and motivated to play.

Why did this happen? What shifted her motivation? Rather than use persuasion, which failed, instead, we tapped into her inner motivational resources. More specifically, we tapped into her need for autonomy. Rather than feeling pressured about how and when she played soccer, she was playing on her own terms. Motivation researchers have found that satisfying the need for autonomy is important for experiencing optimal motivation (Deci & Ryan, 2008).

This example shows that rather than rely on persuasion and attempting to make people do things, we can use more effective strategies such as tapping into the internal processes that drive people's behavior. We can tap into needs such as their need to feel competent, their need to feel like they have choice in what they do, and their need to feel like they belong. We can also tap into people's values, goals, and interests to promote motivation. A great deal of research has identified factors that generate this inner motivation. In the next section, we briefly describe some of these evidence-based theories.

THEORIES OF MOTIVATION

Motivation is an elusive construct. One of the confusing ideas related to motivation is that people believe it is a thing. And we either have this thing or we don't. But motivation is not a thing, it's a *process*—the process of how and why we exert and direct energy toward various endeavors. And this process of motivation includes many subprocesses. This is where the confusion comes from. Motivation is a process influenced by several other things. And those other things combine to influence the energy that we direct toward particular tasks.

The goal of motivation scientists is to figure out how each of these subprocesses function and interact to influence motivation. Researchers have designed theories that explain the processes of motivation. In each of these theories, scholars have proposed and researched factors that are instrumental in the motivation process. In this book, we refer to these instrumental motivation factors as *active ingredients*. These are the factors in a theory that predict, facilitate, or promote motivation.

Drs. Richard Ryan and Edward Deci (2017) proposed *self-determination theory* (SDT) to describe the factors that contribute to motivation. In their theory, humans need to feel competent, autonomous, and related to others, and the degree to which these

needs are satisfied predicts motivation. That is, if these needs are satisfied, people will be more motivated to pursue tasks and meet challenges. Therefore, competence, autonomy, and relatedness are the active ingredients that predict motivation in SDT. SDT, one of the key theories of motivation covered in this book and more generally in the field of psychology, is described in detail in Chapter 2.

There are many other useful theories of motivation. Another prominent theory, *expectancy–value theory*, was proposed by Drs. Jacquelynne Eccles and Allan Wigfield (2020). Although expectancy–value theory is complex, a simplistic summary of this theory is that motivation is predicted by two main factors: (a) the extent to which people *expect* to be successful at a given task and (b) the *value* that people perceive for engaging in an activity. If people believe that they can be successful, with or without help from a more knowledgeable other, they are more likely to be motivated. Similarly, the more value people hold for engaging in a task, the more motivation they will display. Therefore, active ingredients in expectancy–value theory are expectations of success and the value people have for the task or activity. This theory is described further in Chapter 1.

There are many other theories of motivation, each with their own set of active ingredients. Some include attribution theory, achievement goal theory, self-regulation theory, interest theory, and more. We described two here to give you a preview of the types of active ingredients that are included in motivation theories. In Table 1, we list several of the motivation theories that are covered in this book, including a summary of each, and their active ingredients. To learn more about theories of motivation, check out Bonus Chapter A at the end of this book. There we take a deep dive into motivation theory, addressing such issues as why we have so many theories, why motivation is so complex, and why we all struggle with motivation.

In this book, we take a practical approach. That is, instead of being driven by one theory, we tap into many theories to suggest

TABLE 1. Motivation Theories and Active Ingredients

Motivation theories	Summary of theory	Active ingredients
Self-determination theory (Ryan & Deci, 2017)	Level and type of motivation are important. Motivation can be extrinsic or intrinsic. More autonomous types of motivation can be promoted via need satisfaction.	<ol style="list-style-type: none"> 1. Need for competence 2. Need for autonomy 3. Need for relatedness 4. Intrinsic motivation 5. Extrinsic motivation
Expectancy-value theory (Eccles & Wigfield, 2020)	Optimal motivation is determined by whether one perceives that they can be successful at a given task and the value that they have for engaging in the task. There are different types of value.	<ol style="list-style-type: none"> 1. Expectations of success 2. Utility value 3. Attainment value 4. Intrinsic value 5. Cost
Attribution theory (Weiner, 2012)	People attribute their successes and failures to different factors. These factors are called causal attributions and can influence motivation.	<ol style="list-style-type: none"> 1. Causal attributions 2. Controllability 3. Stability
Achievement goal theory (Pintrich, 2000a, 2000b)	Motivation is initiated, directed, and sustained by goals. There are many categories of goals. Types of goals have consequences for people's motivation.	<ol style="list-style-type: none"> 1. Mastery goals 2. Performance approach goals 3. Performance avoidance goals 4. Future utility goals

(continues)

*Motivation Myth Busters***TABLE 1. Motivation Theories and Active Ingredients
(Continued)**

Motivation theories	Summary of theory	Active ingredients
Self-regulation theory ^a (Bandura, 1991)	People are active agents in their own behavior, learning, and motivational processes. We can self-regulate our goals and related strategies.	1. Planning 2. Self-monitoring 3. Self-judgment 4. Self-reaction
Self-efficacy theory ^a (Bandura, 1982)	People's beliefs about their ability to be successful is an integral factor in motivation.	1. Previous mastery experiences 2. Vicarious mastery experiences 3. Social persuasion 4. Emotions
Interest theory ^a (Hidi & Renninger, 2006)	People's interest can be triggered and maintained by factors in the environment. Interest can develop into an individual interest that is more dispositional in nature.	1. Triggered situational interest 2. Maintained situational interest 3. Emerging individual interest 4. Well-developed individual interest

^aThere is debate about whether these are theories of motivation or motivational constructs.

solutions to motivational problems that can arise from believing in different myths about motivation. We take active ingredients from various theories and use those ingredients to solve motivation problems. We also discuss other relevant theories that do not directly focus on motivation but have implications for it, including

social cognitive theory (Bandura, 2002), ecological systems theory (Bronfenbrenner, 1992), and others.

BUSTING MYTHS

Myths are all around us and concern myriad topics in addition to motivation. For example, myths exist about topics such as whether we should eat certain food (e.g., genetically modified foods are bad for us), how our brains work (e.g., we only use 10% of our brains), and the causes of climate change. For more information about what myths are, why it's so hard to debunk them, and how to bust myths, please check out the Bonus Chapter B at the end of the book. What you learn there may surprise you.

Believing in motivation myths can cause us to behave in ways that are not consistent with reaching our goals. They can stop us from using the best strategies for motivating ourselves and others. Knowing the science behind motivation can free us up to engage in strategies that will get us moving toward our goals and help others move toward theirs.

The purpose of this book is to elucidate some of the most prevalent and problematic motivation myths and bust them, replacing them with cutting-edge science and the strategies that follow from it. In each chapter, we implement a myth-busting approach that uses change ingredients called *refutation texts* (Kim & Kendeou, 2021) to help you change your knowledge about motivation. This strategy is described more fully in Bonus Chapter B. To summarize, in a refutation text, the myth is stated with a description of why it is considered incorrect. This will put you into a state of disequilibrium and cause dissatisfaction with your myth. Next, we present the scientifically supported idea in an intelligible, plausible, and fruitful way. We provide the scientific evidence to back it up. This approach will give you new information with which to replace your old ideas

so you can get back into equilibrium. We will do it all in a personally relevant and interesting manner. We will try to relate the ideas to things you may experience in your everyday life, at school, or in the workplace. We may even tell a couple of corny jokes here and there to make it fun. Our goal is to use the science of knowledge change to bust your motivation myths.

In every chapter, we use anecdotes to describe motivation problems and strategies to clarify the concepts and bring them to life. We note that although many individuals are named in the stories used in the book, unless they are public figures or celebrities, their names are made up, and the details about them are fictional or are altered to protect any individual's identity. In a few cases, personal stories are shared with permission.

COMMON MYTHS ABOUT MOTIVATION

In this book, we describe 10 myths about motivation. We identified these myths in a number of ways. First, we searched the Internet for advice about how to motivate yourself and others. There was no shortage of information here! Parents are told, "The truth of the matter is, some children are less motivated than others." They are advised to "Look for things that can be used as rewards for your child" and that "Peer pressure is not a bad thing. It can push your kids to do better in school or in a sport because they want to keep up with their friends." Coaches are counseled to "Lay down individual goals for players," and players are told that "visualizing your dreams as already complete can rapidly accelerate your achievement of those dreams." And as to motivating ourselves, the mantra, "Reward Yourself!" seems to be everywhere. These statements represent some of the myths included in this book.

In addition, we reviewed research and talked with colleagues about their experiences helping people with motivational issues.

We used our own experience in teaching the science of motivation to identify the myths that students bring into the classroom. The result was the 10 myths we discuss in this book.

To follow up on our choices and check out how prevalent these myths are among the general public, we conducted a study in which we surveyed about 500 adults from the United States (Grolnick et al., 2022). Participants were presented with statements of each of the myths and asked how much they agreed or disagreed with them. Although there was some variability in the extent to which the myths were endorsed, we found that most or many people believed in the 10 myths that we describe in this book. Six out of the 10 were endorsed by more than 50% of the participants. And one was endorsed by almost everyone (95.5%) in the study. Although a couple of the myths were less endorsed (two were endorsed by less than a quarter of the participants), we include them because they are clearly out in the public and we see them at work, undermining people's efforts almost every day. We describe how many people endorsed each myth in each of the chapters, but you can learn more about our study by visiting <https://doi.org/10.6084/m9.figshare.24100329>.

In Chapter 1, we discuss the myth that some people are motivated, and others are not. This myth is commonly held. This myth involves seeing motivation as a personality trait. And if motivation is a characteristic of a person, then it can't really be changed. This view can lead you to give up on yourself and others. The scientific view is that all people are motivated. If you played video games all day, you were extremely motivated to play video games. The task for each of us is to redirect our existing motivation toward our goals. We will dig into exactly how to do that in this chapter.

In Chapter 2, we cover the widespread idea that rewards increase motivation. We say widespread because it is a very commonly held belief. In our study, 95% of people assessed this myth as accurate.

In fact, rewards can increase motivation in the short term but can actually decrease motivation over time. We discuss the science of how this undermining effect occurs, how and when to use rewards effectively, and other methods that may be more useful.

Chapter 3 focuses on the myth that competition is an effective motivator. You may hear people say, “I’m a competitive person! Competition is motivating for me!” And just like with rewards, in the short term, for some people, if used correctly, competition can be motivating. However, for others competition can be damaging to motivation. And even for “competitive people,” competition can kill motivation if implemented incorrectly. We describe the nuance of competition as a motivator.

We dive into the myth that motivation is enough for success in Chapter 4. Many people endorse the idea that if people are motivated, they will be successful. On the contrary, motivation alone is not enough to be successful. People must also have necessary knowledge, skills, and strategies to reach goals. We introduce and break down methods for capitalizing on motivation in this chapter.

In Chapter 5, we discuss the popular myth that visualizing success will lead to success. The truth is, you can visualize sailing the ocean on a yacht for years and not be one day closer to making it happen. Science has shown us that visualizing end points alone will not facilitate a desired outcome. Instead, people need to consider the necessary steps to reach that outcome, set relevant subgoals, and design strategies to reach the subgoals. We discuss the process of self-regulation for reaching goals in this chapter.

Chapter 6 explores the myth that people should wait for motivation to strike. Although this is not the most endorsed myth, we suspect that people practice this more often than they explicitly believe in it. You may wait for motivation that never arrives. Additionally, when motivation finally strikes, you may be too busy with other things to capitalize on it. Rather, we recommend setting goals and letting

creativity arise from productivity. In this chapter, we describe goal-setting strategies for getting started and what to do next.

Generally, people think they know how good they are at things. However, this is a myth. In Chapter 7, we discuss how people are not great at predicting their knowledge or skill level. We dive into the science of self-efficacy to describe people's confidence in their knowledge and skills. We explain how having inaccurate levels of confidence can contribute to failure to achieve goals. We describe evidence-based practices for improving self-efficacy and calibrating your understanding of your own abilities or helping others better understand theirs.

A commonly held myth is that structure damages motivation. Many people believe that structure restricts freedom, and, in turn, motivation is stifled. In Chapter 8, we refute this myth and describe how structure is instrumental for promoting motivation, as it gives people information about how they can be successful. Structure can be implemented in ways that make people feel controlled or in ways that help people to feel both competent and autonomous. In this chapter, we describe methods for implementing structure in a way that supports autonomy.

When someone performs well at an activity, the first thing we often say is "You're so smart!" or "Wow, you're great at that!" Each of these phrases sends the message that the person has high ability. In Chapter 9, we discuss the myth that telling people they are smart increases motivation. When someone constantly receives feedback about their ability when successful, they are likely to attribute failure to their ability as well. This can lower confidence and, in consequence, reduce motivation. We explain the science of making healthy attributions about success and failure in this chapter.

Throughout the first nine chapters, we discuss individual factors that influence our motivation. In Chapter 10, we discuss the myth that motivation is completely dependent on individual factors and factors in people's immediate environments. In fact, scientists

Motivation Myth Busters

have found that our larger environments can impact our motivation. In particular, structural inequities can have negative influences on our motivation. In Chapter 10, we discuss implications of inequity within our environments and methods for combating inequities and designing environments that optimally facilitate motivation.

In the Conclusion, we integrate ideas from each chapter to describe a holistic model for motivating ourselves and others. We include a “roadmap” to choosing motivation boosters that will be most effective for getting yourself or others unstuck. You will have the opportunity to try your hand at identifying motivational problems and following a pathway to solving them.

THE MYTH BUSTER TEAM

Myths about motivation, like all myths, are prevalent and resistant to change. But psychological science has a method for busting them. And we are the team to do it! Our team was built with the goal of busting motivation myths. Each author of this book brings a particular skill set to aid in that pursuit. We come from different sub-disciplines of psychology, study different aspects of motivation, and even have expertise in how to bust myths.

Our first author, Dr. Wendy Grolnick, is a licensed clinical psychologist by training and professor of psychology at Clark University. She has expertise in all areas of motivation, with a particular focus on parenting. She has written two books on parenting that emphasize concepts included in the myths that are covered in this book, including parental control and competition. Dr. Grolnick is our expert on motivation, bringing both developmental and clinical psychology approaches to this book.

Our second author, Dr. Ben Heddy, is an educational psychologist by training and a professor at the University of Oklahoma. As an educational psychologist, Dr. Heddy focuses on motivation

that occurs in learning contexts. Specifically, he studies how people become motivated to change. That is, how do people change their motivation, knowledge, attitudes, emotions, and perceptions? In addition, and particularly relevant to this book, he studies how people form and change myths. Dr. Heddy is our myth-busting expert and brings an educational classroom-focused lens to this work.

Our third author is Dr. Frank C. Worrell, a school psychologist by training and a distinguished professor at the University of California at Berkeley. At the time of writing this book, Dr. Worrell was the president of the American Psychological Association. As a school psychologist, he focuses on motivation and assessment of children in a school context. Dr. Worrell has edited several books on gifted education and on developing talent. His research focuses on at-risk youth and the role of psychosocial and cultural identities in relation to student learning and motivation. Dr. Worrell is our expert on optimal performance, talent development, and cultural factors that influence the motivational process.

With this team, we are confident that we represent motivation well from different perspectives. Given our unique training and expertise, we work to check and balance each other's knowledge to reduce our own biases being interjected into this book. Our goal is to promote the most scientifically up-to-date understanding of motivation in all readers of this book. Together we are the Motivation Myth Busters.

LET'S BUST SOME MYTHS AND GET MOTIVATED!

In the following chapters, we provide you with the most cutting-edge understanding of motivation to replace the myths that might be holding you back from motivating yourself or someone else. We describe how scientists have come to these understandings of motivation. And we give you suggestions about how to use the science of motivation to reach your goals. So, let's get to it!