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This document applies the concept of a fixed vs. growth mindset to music performance in order to promote awareness among classical musicians. As first outlined by Carol S. Dweck, a person with a fixed mindset holds the beliefs that their qualities and abilities are innate and unchangeable. In contrast, a person with a growth mindset believes that one can cultivate their abilities and qualities through effort, strategy, and help from others. This document consists of a review of psychological studies and reflects on how musicians with fixed vs. growth mindsets might respond to internal dialogue, external feedback, and personal setbacks.

AN APPLICATION OF FIXED VS. GROWTH MINDSET TO MUSIC PERFORMANCE

by

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Approved by

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DEDICATION

To my parents and husband

APPROVAL PAGE

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CHAPTER I: INTRODUCTION

This dissertation will apply the concept of a fixed vs. growth mindset to music performance to ascertain how it may impact individual performers.

The distinction between a fixed vs. growth mindset was first proposed by Carol S. Dweck, Ph.D., currently a Professor of Psychology at Stanford University and a leading researcher in personality, social psychology, and developmental psychology. A growth mindset is based on the belief that “your basic qualities are things you can cultivate through your efforts, your strategies, and help from others.”¹ In contrast, a fixed mindset is based on the belief that your qualities and abilities are innate and unchangeable.² Both mindsets are based on belief, and each can significantly alter how you see yourself. Self-perception can often alter our reality. Dweck asks, “What are the consequences of thinking that your intelligence or personality is something you can develop, as opposed to something that is a fixed, deep-seated trait?”³ Dweck even says that the consequences of these beliefs, of which we may even be unaware, “strongly affect what we want and whether we succeed in getting it.”⁴ For a musician, these beliefs could lead one not to audition for a job, not enter a concerto competition because of the challenges of memorization, or not put in the extra effort in an aural theory class because of the limiting belief that one has a bad ear. In these ways and others, a fixed mindset can limit a musician from reaching their full potential.

¹ Carol S. Dweck, *Mindset: The New Psychology of Success* (New York: Ballantine Books, 2016), 7. The first edition of *Mindset* was published in 2006. Dweck started her research in the 1970s. This dissertation references her studies that were published in 1980 and 2017.

² *Ibid.*, 6

³ *Ibid.*, 4.

⁴ *Ibid.*, *ix*.

Changing one's mindset can seem like a daunting task: how we think, our fears/anxieties, and what motivates us are ingrained into who we are. However, Dweck says, "mindsets are just beliefs. They're powerful beliefs, but they're just something in your mind, and you can change your mind."⁵ The *Webster's New Universal Unabridged Dictionary* defines "belief" as "an acceptance of something as true."⁶ A key word in this definition is "acceptance," because acceptance is a choice. Beliefs are not facts. The sun never orbited earth, but at one point, many people *believed* it did. For mindsets, what you believe matters more than what is true. For a musician with a fixed mindset, the belief that one is talented or not talented matters more than what is the truth. For a musician with a growth mindset, the truth matters but the focus is more on the belief in the potential of getting better.

Does every musician have a fixed mindset? While all musicians do not have a fixed mindset, the notion of "musical talent," the audition process of winning an orchestral job based solely on a brief performance, and the expectation of performing music perfectly without any mistakes are just a few examples of how standards in classical music can reinforce a fixed mindset. In Chapter 1, fixed and growth mindsets will be further explained: what they are, how they were discovered, and what they establish in a person's identity. Chapter 2 consists of a review of different life stories, including my own, to show how a fixed or growth mindset affects one's life. Chapter 3 outlines how different ways of giving and receiving feedback contribute to the development of one mindset or the other. Chapter 4 helps guide musicians through the beginning steps in establishing a growth mindset towards their own musical practice.

⁵ Dweck, *Mindset*, 16.

⁶ Noah Webster and Jean L. McKechnie, *Webster's New Universal Unabridged Dictionary: Based Upon the Broad Foundations Laid Down by Noah Webster*, Deluxe 2nd ed. (New York: Simon & Schuster, 1983), 169.

CHAPTER II: OVERVIEW OF MINDSETS

The distinction between fixed and growth mindsets stems from Dweck’s research early in her career on how children cope with failure. Dweck gave children two puzzles to solve—first an easy puzzle and then a more difficult one. When confronted with the difficult puzzle, some children grunted, perspired, toiled, and gave up, while others were excited about the challenge. One ten-year-old boy “pulled up his chair, rubbed his hands together... and cried out, ‘I love a challenge!’”⁷ Dweck was puzzled by the excited reactions: “I always thought you coped with failure or you didn’t cope with failure. I never thought anyone *loved* failure.”⁸ She reflected that “they didn’t even think they were failing. They thought they were learning.”⁹ Not only were they learning, they were displaying a growth mindset.

Dweck wondered, “Why do some children relish challenges and thrive in the face of setbacks, while others who are just as skilled fear challenges and fall apart when they hit setbacks?”¹⁰ She realized that the children could be divided into two categories: children who were driven to prove their *ability*, and children who were driven to *learn*. These categories developed into the concept of two mindsets: a fixed ability that needs to be proven (fixed mindset) and a changeable ability that can be developed through learning (growth mindset).¹¹ The contrasting reactions of frustration or excitement to the difficult puzzle define the differing reactions of a fixed or growth mindset towards an obstacle or setback.

⁷ Dweck, *Mindset*, 3.

⁸ *Ibid.*, 3.

⁹ *Ibid.*, 4.

¹⁰ Carol S. Dweck, “The Journey to Children’s Mindsets—and Beyond,” *Child Development Perspectives* 11, no. 2 (June 2017): 139.

¹¹ Dweck, *Mindset*, 15.

Children being challenged with difficult puzzles in a psychology study is a controlled experiment, but Dweck wanted to see if the mindsets were a factor in learning for adults, so she surveyed incoming college freshmen. At the University of Hong Kong, everything is taught in English: lectures, textbooks, and exams. In short, English proficiency is essential to academic success at the University of Hong Kong; however, not all students are proficient in the language.¹² One might assume that the students who are not fluent in English would use every resource possible to ease the challenge of studying at the university. Indeed, the findings of the survey indicated that among the students whose skills in English were unsatisfactory, the students with a growth mindset were more likely to take the remedial course than those with a fixed mindset.¹³ It was made clear that the remedial course was going to teach the students “skills that were essential for their future success,”¹⁴ and yet, the students with the fixed mindset opted out, actively choosing to make it more difficult to succeed. Is the word “remedial” turning students off from taking the course? Is pride or fear a factor in the fixed mindset? Or is it the all-or-nothing attitude of the fixed mindset, where if skills in English are unsatisfactory, they will always be unsatisfactory, no matter how much work in a remedial course is accomplished? This survey showed that a fixed mindset can handicap a student’s potential by causing them not to reach out and take the steps needed to learn an essential skill.

Not wanting to sign up for a class and put in the extra effort needed is an example of a self-handicapping behavior that is common among people with a fixed mindset. Edward E. Jones, psychology professor at Princeton University, and Steven Berglas, Harvard University

¹² Dweck, *Mindset*, 17.

¹³ Ying-yi Hong et al., “Implicit Theories, Attributions, and Coping: A Meaning System Approach,” *Journal of Personality and Social Psychology* 77, no. 3 (September 1999): 593–594.

¹⁴ Hong et al., “Implicit Theories,” 593–594.

Medical School research fellow, coined the term “self-handicapping” to mean the “strategic creation of obstacles to a successful performance.”¹⁵ Self-handicapping behavior can range from procrastination, lack of practice, and reduced effort to drug and alcohol consumption and creating unfavorable performance settings.¹⁶ To understand why some engage in self-handicapping behavior, Frederick Rhodewalt, psychology professor at the University of Utah, surveyed eighty undergraduate students regarding their mindsets and behavior towards goals. Rhodewalt found in his study that students with a fixed mindset were more likely to engage in self-handicapping behaviors than those who had a growth mindset.¹⁷ People with a fixed mindset are more likely to engage in self-defeating behaviors such as withdrawing effort or procrastinating, which jeopardizes their chances of success while also giving them face-saving excuses for a poor performance. Not all people with a fixed mindset are self-handicappers; but the trend is more common among people with a fixed mindset. A person with a growth mindset, however, would not practice self-handicapping but seek improvement.

According to Dweck, “the idea of trying and still failing—of leaving yourself without excuses—is the worst fear within the fixed mindset.”¹⁸ The reason for this fear is because when a person with a fixed mindset is considered a natural, a prodigy, or a genius, then putting forth the effort and *still* failing labels them as not having these superior innate abilities.¹⁹ In her memoir, *Nadja On My Way*, the violinist Nadja Salerno-Sonnenberg discusses her self-handicapping

¹⁵ Frederick Rhodewalt, “Conceptions of Ability, Achievement Goals, and Individual Differences in Self-Handicapping Behavior: On the Application of Implicit Theories,” *Journal of Personality* 62, no. 1 (March 1994): 67.

¹⁶ *Ibid.*, 68.

¹⁷ *Ibid.*, 78.

¹⁸ Dweck, *Mindset*, 42.

¹⁹ *Ibid.*, 42.

behavior of not practicing and showing up to her violin lessons without her violin for seven months while studying at Juilliard.²⁰ She explains that this self-handicapping behavior was based in fear, because for her nothing is harder than saying, “I gave it my all and it wasn’t good enough.”²¹ She further explains that her self-handicapping behavior gave her a face-saving excuse for why a performance went poorly: “If you go to an audition and don’t really try, if you’re not really prepared, if you didn’t work as hard as you could have and you didn’t win, you have an excuse.”²² Self-handicapping behavior shows how the fixed mindset can paralyze one and prevent improvement. This fear of failure means that one no longer stretches oneself in working on new techniques and new music, but instead sticks to music that one knows and is comfortable with. Wanting to work and improve, even if that risks failing, means growing with new learning experiences and new abilities.

The evaluations and expectations of being a classical musician can reinforce a fixed mindset. Learning music quickly and performing it without mistakes is every classical musician’s end goal—whether the musician has a fixed or growth mindset. “When do you feel smart?” Dweck asked this question to samples of people ranging from grade-schoolers to young adults. People with a fixed mindset responded, “When I do not make any mistakes” and “When I finish something fast and perfect.”²³ These fixed mindset responses are interesting because if Dweck had asked classical musicians, “When do you feel talented?,” the responses would have been similar. A popular phrase among musicians is, “Practice does not make perfect. *Perfect*

²⁰ Nadja Salerno-Sonnenberg, *Nadja On My Way* (New York: Crown Publishers, Inc., 1989), 49; quoted in Dweck, *Mindset*, 42.

²¹ *Ibid.*, 50.

²² *Ibid.*, 50.

²³ Dweck, *Mindset*, 24.

practice makes perfect.” This quote was printed on the back cover of my first etude book in sixth grade band – a subtle nudge not to make mistakes, even when practicing.

Growth mindset responses are all centered around work and the process of learning rather than the outcome. For instance, when people with a growth mindset were asked, “When do you feel smart?” They replied: “When it’s really hard, and I can do something I couldn’t before” and “[When] I work on something [for] a long time, and I start to figure it out.”²⁴ The central concept of a growth mindset is that even though one may not be born with innate natural gifts, through work and persistence over time, achievement is possible. The etude book with the saying “Perfect practice makes perfect,” begins with songs such as “Hot Cross Buns,” which any player can learn with very little practice. Everyone starts learning music at a basic level, and veteran musicians can forget the process of learning an instrument, which occurred over years of consistent practice, to reach their current playing ability.

Is there such a thing as innate talent in music? Yes, of course. However, author Malcolm Gladwell says that “the closer psychologists look at the careers of the gifted, the smaller the role innate talent seems to play and the bigger the role preparation seems to play.”²⁵ Often the talent of individuals who are at the top of their field are simply admired instead of studied. The psychologist Abraham H. Maslow stated, “Even when... the saints and sages and great leaders of history have been available for study, the temptation too often has been to consider them not human but supernaturally endowed.”²⁶ To challenge the common conception of innate abilities, psychologist K. Anders Ericsson and Neil Charness studied talent at the Academy of Music in

²⁴ Dweck, *Mindset*, 24.

²⁵ Malcolm Gladwell, *Outliers: The Story of Success* (New York: Back Bay Books, 2008), 38.

²⁶ Abraham H. Maslow, *The Farther Reaches of Human Nature* (New York: Penguin Group, 1971), 7.

Berlin. They found that elite performers of violin had each totaled ten thousand hours of practice by the age of twenty, merely good students had accumulated eight thousand hours, and the lowest ranked violinists had at least four thousand hours of practice.²⁷ A conclusion of the study is that the more hours a musician worked, the more advanced they became at their instrument.

Ericsson and Charness did not find any naturally talented musicians in their study. There were no musicians who practiced significantly less than their peers did and were considered an elite musician by their teachers.²⁸ The study also did not find any musician who worked harder than everyone else yet did *not* have what it took to be elite.²⁹ In short, “once a musician has enough ability to get into a top music school, the thing that distinguishes one performer from another is how hard he or she works.”³⁰ According to Ericsson and Charness, there is innate talent, but to achieve the level of mastery associated with being a world-class expert, in anything, ten thousand hours of practice is required.³¹ This principle holds not just in music, but also in other areas of expertise. Therefore, Ericsson and Charness’ study shows that consistent work of putting in the hours over time is key to getting to the level of expertise in any field.

In discussions of natural talent and prodigies, Wolfgang Amadeus Mozart is an obvious choice. Mozart is almost synonymous with prodigy: the chapter on Mozart in the book, *The Lives of the Great Composers*, is entitled “Prodigy from Salzburg.”³² In *A History of Western Music*,

²⁷ K. Anders Ericsson, Ralf Th. Krampe, and Clemens Tesch-Römer, “The Role of Deliberate Practice in the Acquisition of Expert Performance,” *Psychological Review* 100, no. 3 (1993): 379; Gladwell, *Outliers*, 39.

²⁸ Gladwell, *Outliers*, 39.

²⁹ *Ibid.*, 39.

³⁰ *Ibid.*, 39.

³¹ *Ibid.*, 40.

³² Harold C. Schonberg, *The Lives of the Great Composers*, 3rd ed. (New York: W. W. Norton & Company, Inc., 1997), 95.

the first section on Mozart's life is entitled "Child Prodigy."³³ The first sentence in *The Inner Game of Music* is, "Wolfgang Amadeus Mozart, of course, was a prodigy."³⁴ This dissertation defines "prodigy" as a highly talented child, a description Mozart clearly fits. Mozart, enigma that he was, inspires questions with respect to fixed vs. growth mindset. If at least ten thousand hours or ten years of practice is required, how does a prodigy such as Mozart, who started composing at the age of six, exist? Was Mozart a natural talent or was he blessed with a knowledgeable father who started teaching him as a toddler so that he could play at a professional level by the age of five? Would Mozart have been a so-called natural talent if he had first started playing piano at the age of twenty? Dweck says that "often people believe that the 'gift' is the ability itself. Yet what feeds it is that constant, endless curiosity and challenge seeking."³⁵ In other words, innate talent alone cannot make a prodigy, but the effort a child puts into the task that they are obsessing over at such a young age. Chris Hildrew, author of *The Growth Mindset School*, is often faced with the nature vs. nurture debate in education. In his opinion, "We are all born with a certain amount of natural ability, but having a growth mindset – with grit, self-control, conscientiousness, and an intellectual 'appetite' – will allow us to make the most of what natural ability we inherit."³⁶ Prodigies may be an argument for innate talent and further establishing a fixed mindset, but they still had to work.

³³ Peter J. Burkholder, Donald Jay Grout, and Claude V. Palisca, *A History of Western Music*, 7th ed. (New York: W.W. Norton & Company, Inc., 2006), 546.

³⁴ Barry Green, and W. Timothy Gallwey, *The Inner Game of Music: Overcome Obstacles, Improve Concentration and Reduce Nervousness to Reach a New Level of Musical Performance* (New York: Doubleday & Company Inc., 1986), 11.

³⁵ Dweck, *Mindset*, 63.

³⁶ Chris Hildrew, *Becoming A Growth Mindset School: The Power of Mindset to Transform Teaching, Leadership and Learning* (New York: Routledge, 2018), 147.

In contrast to the case of prodigies, talent and early childhood interest is not indicative of future potential. My piano teacher from childhood is astounded that I am pursuing a doctorate in music. While I was studying with her, I rarely practiced because of lack of interest. She was frustrated that I could not read note names fluently or understand rhythm. Being a pianist was not in my future, but I found my passion in music when I started playing bassoon in sixth grade. To pursue a career in music after showing little interest in music during my childhood is not extraordinary. In connection with this pattern, Dweck references in her book Dr. Benjamin S. Bloom, who researched high achievers. Dweck summarizes the findings of Bloom's research by saying:

Most were not that remarkable as children and didn't show clear talent before their training began in earnest. Even by early adolescence, you usually couldn't predict their future accomplishments from their current ability. Only their continued motivation and commitment, along with their network of support, took them to the top.³⁷

With a fixed mindset, it is easy to dismiss a musician's future potential if they do not show interest or talent as children and adolescents. Bloom's research shows that this fixed mindset way of thinking is incorrect. Instead, his study shows that motivation, commitment, and a network of support, all features of a growth mindset, are more of an indicator of future success.

Whether one started playing music as a toddler or as a teenager, musicians universally agree that the culmination of hours of practice each day over a long period will often lead up to a single performance. How a person with a fixed or growth mindset responds to a single evaluation is a cornerstone difference between the two. Like a single performance, a final exam is a single snapshot of a student's knowledge, but does not reflect the culmination of work of a whole semester. Dweck explains that people with a growth mindset do not panic when they receive a 60% on an exam, for example, because "an assessment at one point in time has little value for

³⁷ Dweck, *Mindset*, 65.

understanding someone’s ability, let alone their potential to succeed in the future.”³⁸ However, people with a fixed mindset view a single evaluation as something that measures them forever.³⁹

Before Dweck coined the term “fixed mindset,” she used the term “helpless children” to describe the same phenomenon. Like those with a fixed mindset, helpless children “attribute their failures to lack of ability and view failure as insurmountable.”⁴⁰ Before “helpless” was used to categorize children, “learned helplessness” was discovered in dogs. In 1967, Steven F. Maier and Martin E.P. Seligman found that dogs who were exposed to an inescapable and unavoidable electric shock in one situation later failed to learn how to escape a shock when escape was possible.⁴¹ Learned helplessness occurs when events are uncontrollable, and the organism learns that its behavior has no effect on subsequent events.

Learned helplessness is also observed in fish, rats, cats, and humans.⁴² Courtney Ackerman says in her blog, “When humans or other animals start to understand (or believe) that they have no control over what happens to them, they begin to think, feel, and act as if they are helpless.”⁴³ She later goes on to say,

This phenomenon is called learned helplessness because it is not an innate trait. No one is born believing that they have no control over what happens to them and that it is useless to try gaining control. It is a learned behavior, conditioned through experiences in which

³⁸ Dweck, *Mindset*, 29.

³⁹ *Ibid.*, 29.

⁴⁰ Carol I. Diener and Carol S. Dweck, “An Analysis of Learned Helplessness: II. The Processing of Success,” *Journal of Personality* 39, no. 5 (1980): 940. This dissertation analyzes this study in greater detail in Chapter 2. See page 29.

⁴¹ Steven F. Maier and Martin E. P. Seligman, “Learned Helplessness: Theory and Evidence,” *Journal of Experimental Psychology: General* 105, no. 1 (1976): 3.

⁴² *Ibid.*, 3.

⁴³ Courtney E. Ackerman, “Learned Helplessness: Seligman’s Theory of Depression (+Cure),” *PositivePsychology.com* (October 13, 2020), accessed November 10, 2020, <https://positivepsychology.com/learned-helplessness-seligman-theory-depression-cure/>.

the subject either truly has no control over his circumstances or simply perceives that he has no control.⁴⁴

Neither humans nor other animals are born with a fixed mindset. Learned helplessness is a way of thinking that has been enforced by an event where the outcome is out of your control, no matter your actions. In the Maier and Seligman study, the authors prove that this way of thinking can be changed. In 1968, Seligman hypothesized that forcibly dragging a dog from one side of the shuttle box to the other, an action that would terminate the shock, might effectively help the dog to learn that he did have control of the shock. After the dogs were forcibly dragged up to fifty times, each dog began to respond on his own. It took effort, but the dog's recovery from learned helplessness was complete and lasting.⁴⁵ It is important to learn from these studies that learned helplessness in children and dogs affects behavior when faced with a setback or failure. Through the outcomes of these studies, and proof that this behavior can be changed, we see that feeling helpless is a learned habit of thinking that can be changed through consistent effort.

⁴⁴ Ackerman, "Learned Helplessness: Seligman's Theory of Depression."

⁴⁵ Maier and Seligman, "Learned Helplessness," 20.

CHAPTER III: CASE STUDIES

After looking at the fixed vs. growth mindsets through Dweck's research, this chapter will now apply the concept of mindsets through broader case studies. Athletes provide a good metaphor, because when they are successful, it is the habit of the public to think that their abilities are superhuman. With this way of thinking, we forget that these athletes are merely humans who worked really hard, even when faced with setbacks and failure. An example of failure turned into success is a young Michael Jordan who did not make his high school's varsity basketball team. If Michael Jordan had a fixed mindset, he would have viewed not making the varsity team as proof that he should not play basketball. Instead, he had a growth mindset and used this failure as motivation to work even harder: "Whenever I was working out and got tired and figured I'd ought to stop, I'd close my eyes and see that list in the locker room without my name on it – that usually got me going again."⁴⁶ Michael Jordan's mindset towards his failure led to an iconic career. A visual example of Jordan's iconic status is the picture of him defying gravity at the 1988 NBA Slam Dunk Contest – a picture, which suggests that he is innately talented. However, when we understand his relentless work ethic, even through setbacks and failure, this photo then becomes visual proof that through Jordan's growth mindset, he became a larger-than-life athlete.

Like Michael Jordan, oboist Alex Klein faced a very difficult setback which required a growth mindset to get past. From 1995 to 2004, Klein was principal oboist of the Chicago Symphony Orchestra, and he won a Grammy Award in 2002 for his recording of Richard

⁴⁶ Peter May, "The Man Who Beat Out Jordan," *The Boston Globe*, June 11, 1991, p. 105. Michael Jordan being cut from his high school varsity team is also referenced in Dweck, *Mindset*, 85-86.

Strauss's oboe concerto.⁴⁷ In 2001, he was diagnosed with focal dystonia, a neurological condition that in his case affected the middle and ring finger of his left hand.⁴⁸ By 2003, Klein started experiencing tendinitis every month because he was forcing his fingers to play the oboe – an action his hands did not want to do. In 2004, he only played a couple concerts because of the pain, and then he resigned from the orchestra that same year.

Klein exhibited a growth mindset despite the disease. Focal dystonia is incurable and irreversible, but Klein did not have the mindset that this diagnosis was the end of his playing career. Instead, he saw focal dystonia as a “curve in the road” and relearned how to play the oboe with the modifications needed to play despite his disease. He added a Brazilian coin to a key on his oboe, which shifted his left hand slightly to a more comfortable position, and he limited the amount of time he practiced to only four days before a performance. These modifications combined with electric shock therapy and icing his hands allowed him not only to continue his performance career, but also in 2016 to win the audition for principal oboist of the Chicago Symphony Orchestra for the second time. Though he was denied tenure with the orchestra in April 2017 for reasons undisclosed to the public, he continues to perform as principal oboist of the Calgary Philharmonic Orchestra. Because of Klein's growth mindset, a diagnosis of focal dystonia did not end his career. Instead, Klein used the opportunity to experiment, which not only continued his playing career, but also gave hope to others who suffer from the neurological condition. These stories of overcoming setbacks, show that having a growth mindset can help someone through challenging times in a person's life.

⁴⁷ Alex Klein, interview by Zsolt Bognár, *Living the Classical Life*, “I felt my life was over.” – Alex Klein,” January 11, 2018, <https://www.youtube.com/watch?v=1V9mWyHsNRk>.

⁴⁸ Klein, interview by Bognár, *Living the Classical Life*.

In contrast, the journey of becoming one of the greatest in your field is much different with a fixed mindset, as we see in Deena Kastor's running career. Kastor, the American female record holder in the marathon and bronze medalist in the women's marathon at the 2004 Olympics, had a fixed mindset toward her running talent. In Kastor's memoir, *Let Your Mind Run*, she says, "That was how I thought of my ability, as a fixed trait, like having blond hair and freckles. In my mind, everyone had a set amount and whoever had the most would win."⁴⁹ Kastor's fixed mindset towards her athletic talent makes sense, because she did not have to work hard at first to succeed. Practices were more about being with friends than getting better. For example, during practice Kastor and her high school teammates would "borrow" boats on Malibu Lake and tip each other over, hide behind trees to scare other runners on the trail, and make a detour mid-run for milkshakes.⁵⁰ For Kastor, talent was so important that she did not believe she had to grow through taking practice seriously. Even without a serious work ethic in practice, as a high school freshman, Kastor consistently placed first in races, won the California State title, and placed eleventh in a National Cross-Country Championship.⁵¹ Instead of hard work, she relied on her talent, and attributed her success in running to "the genes [she] was born with."⁵² Kastor is clearly an innately fast runner in that she achieved at a high level despite not practicing seriously. However, we have to consider what happens to a fixed mindset when success begins to fade away. As we see in Kastor's journey, her reliance on talent would go on to disappoint her.

⁴⁹ Deena Kastor and Michelle Hamilton, *Let Your Mind Run: A Memoir of Thinking My Way to Victory* (New York: Penguin Random House LLC), 21.

⁵⁰ *Ibid.*, 26.

⁵¹ *Ibid.*, 28.

⁵² *Ibid.*, 72.

During Kastor's senior year of high school, she signed with the University of Arkansas, and won the California state championship race as well as the West regionals race.⁵³ However, after placing sixth in the national championship race, her undefeated season was ruined, and she would graduate, never being a high school national champion. She blamed her talent for not showing up for the national race, and even asked her talent in a whisper, "Where were you?"⁵⁴ While her talent could not reply, perhaps she ought to have asked herself, "Why didn't I practice enough?" Kastor relied on "talent" alone, which took her very far, but when focused and consistent work was needed to achieve her goal of becoming a national champion, she got a milkshake instead. Also, placing sixth in a national championship race would not be considered a failure to most people. But this is how all-or-nothing a fixed mindset can be with achieving goals. For Kastor, she considered not winning as a failure.

As a college student athlete at the University of Arkansas, Kastor was confronted with work vs. talent. As a college athlete, running no longer was a fun after school activity, but felt like a profession, with a solo run each morning, 3 p.m. team practice, then weightlifting.⁵⁵ Even after consistent serious work, she began to wonder if talent was really the answer after winning the first two races of the season. Kastor says, "I still didn't understand why...I was winning now. What made one runner better than another?"⁵⁶ The men's team had a saying that answered her questions: "The cream rises to the top," meaning the runners who worked the hardest ended up being the scorers in races.⁵⁷ This saying should have shown Kastor that running ability is not a

⁵³ Kastor and Hamilton, *Let Your Mind Run*, 31.

⁵⁴ *Ibid.*, 34.

⁵⁵ *Ibid.*, 38.

⁵⁶ *Ibid.*, 41.

⁵⁷ *Ibid.*, 41.

fixed trait, but can grow with hard work. She would ultimately take this saying to the extreme by pushing herself beyond her limit.⁵⁸ This extreme work ethic without any recovery days caused a cycle of injuries that lasted through her sophomore and junior years. Injury free, she would consistently win, but then another injury would occur and the all-or-nothing judgements returned: “You’re fragile, totally worthless.”⁵⁹

When Kastor was not busy running or recovering from an injury, her passion was baking. She even started her own business of homemade baked goods during her junior year, which grew to supply seven coffeehouses with scones, bagels, muffins, cakes, cookies, and tortes.⁶⁰ Toward the end of her senior year, people asked about her plans after graduation, and “the only option...[in Kastor’s mind], was to keep baking” and open her own café.⁶¹ When her parents discouraged her, she proclaimed to them, “Baking is the only thing I’m good at!”⁶² With this proclamation, we see that her fixed mindset was limiting her future in running by not allowing her to see that when injury free, she was successful and therefore had a future in professional running.

Though Kastor could not see her future potential as a professional runner, the assistant running coach of Arkansas did. Convinced her running career was not over, he gave her Coach Joe Vigil’s number. Vigil was a legendary retired college running coach whose teams had won 19 national championships and who had started a professional running team in Alamosa, Colorado. After calling Vigil, Kastor felt motivated and inspired: he “never mentioned winning.

⁵⁸ Kastor and Hamilton, *Let Your Mind Run*, 41.

⁵⁹ *Ibid.*, 43.

⁶⁰ *Ibid.*, 46.

⁶¹ *Ibid.*, 47.

⁶² *Ibid.*, 47.

He...talked a lot about traits, but not one of them was talent...I knew I wasn't going to visit Alamosa. I was going to move there."⁶³ However, Vigil was less impressed with her: "a young woman was on the line, asking if [I] could help her qualify for the Olympics. She had gotten so sick of running... and was thinking of opening a...café instead. Unless [I]...would allow her to join [my] team."⁶⁴ He decided to approach her with a reverse psychology reply: "Forget it. Go make mochaccinos."⁶⁵ When Kastor showed up anyway, Vigil decided to give her a chance: "The team meets tomorrow at seven thirty at Cole Park. See you then, and bring a good attitude."⁶⁶ This command, "Bring a good attitude," and not, "bring your running shoes," or "eat a good breakfast" shows how important a positive attitude is in his philosophy of coaching, though it took him a long time to realize its importance.

Through looking at Vigil's background of study, we can see how he came to realize the importance of a good attitude in the athletes he coached. Vigil had a vast knowledge of the body and running, having earned a Ph.D. in Exercise Physiology, and having traveled to Kenya, Peru, and Russia to study the world's best runners.⁶⁷ His observation of the best runners in the world: "They worked hard... more than [he] thought was possible."⁶⁸ Through observing the best runners in the world, he learned that there was more than just talent in running. It was an extreme work ethic which took runners to the elite level.

⁶³ Kastor and Hamilton, *Let Your Mind Run*, 53.

⁶⁴ Christopher McDougall, *Born to Run: A Hidden Tribe, Superathletes, and the Greatest Race the World Has Never Seen* (New York: Random House, Inc., 2009), 118.

⁶⁵ McDougall, *Born to Run*, 118.

⁶⁶ Kastor and Hamilton, *Let Your Mind Run*, 59.

⁶⁷ McDougall, *Born to Run*, 78.

⁶⁸ Kastor and Hamilton, *Let Your Mind Run*, 70.

As a spectator of the Leadville 100 ultramarathon race, Vigil learned that the next step in endurance had nothing to do with the physicality of running but with the mental. At mile 60 of the race, Vigil watched two members of the Tarahumara, a tribe indigenous to the Copper Canyon, arrive at the aid station, receive medical clearance, and then return to the trail running and laughing.⁶⁹ Vigil marveled at the Tarahumara's sense of joy "as if running to the death made them feel more alive."⁷⁰ Through these smiles, Vigil realized the importance of the mind and a good attitude in running. In Vigil's book on his coaching methodology, *Road to the Top*, the first chapter is entitled "Philosophy."⁷¹ In the opening chapter of his book, Vigil does not discuss the physical aspects of running, and how to improve and win. He instead uses the first chapter to discuss the importance of establishing a philosophy, which is a set of principles whatever those may be depending on the goals of the individual, because it will guide an athlete in their "relentless quest for excellence and the unyielding belief in yourself that challenges you to strive and to overcome."⁷² Though Vigil does not mention "growth mindset" specifically in his book, he shows the importance of having a growth mindset in running through applying aspects of the growth mindset to a runner's state of mind.

Through being coached by Vigil, Kastor's transition to a growth mindset began when she no longer relied on her talent to win races. She says: "I had relied on talent for so long that it had seemed the only thing propelling my running were the genes I was born with. Now I felt part of

⁶⁹ McDougall, *Born to Run*, 90.

⁷⁰ *Ibid.*, 91.

⁷¹ Joe I. Vigil, *Road to The Top: A Systematic Approach to Distance Training that Produced One of America's Greatest Running Programs* (Albuquerque: Creative Designs, Inc., 1995) 1.

⁷² *Ibid.*, 2.

the process. I was participating in the work, driving and directing it with the choices I made.”⁷³ However, after four months of training as a professional runner, Kastor yet again faced disappointment. She placed 20th in her first professional race and her negative internal dialogue returned: “Even after all this work, I guess I’m not that good.”⁷⁴ After the race, Vigil could see Kastor was disappointed, and said that he was glad for it because it showed that she was invested, and that she cared. Vigil’s reaction made Kastor see that her failure should be used as motivation to work harder. Kastor says,

My place wasn’t what mattered to Coach. What mattered was my commitment. Understanding this, I began moving away from thinking *this is as good as I am*, a limiting, judgmental perspective that left me powerless, to *this is as good as I am today*, a statement that allowed for growth and returned my power.⁷⁵

Through training with Vigil, Kastor learned that holding herself to a high standard was good, but attaching her self-worth to the outcome of a race enforced her negative attitude and fixed mindset towards running and herself.

Musicians experience a fixed vs. growth mindset as well. While in college, I developed the belief that my strengths as a bassoonist were best suited for playing second bassoon in an orchestra, which created a fixed mindset of only seeing myself as a second bassoonist. After some reflection, I realized that my fixed mindset originated from a failed performance while playing principal bassoon. I was playing so out of tune during this performance, an audience member laughed out loud after the woodwind section released an exposed chord. I felt I single-handedly ruined the concert and the weight of wasting everyone’s hard work fell heavy on my conscience. When I came home from the concert, I became sick to my stomach and was

⁷³ Kastor and Hamilton, *Let Your Mind Run*, 71–72.

⁷⁴ *Ibid.*, 77.

⁷⁵ *Ibid.*, 78.

embarrassed to show my face in the next rehearsal. This failed performance established my fixed mindset, as I perceived that I had ruined the performance for everyone on stage while playing principal bassoon. Because of the immediate negative feedback of an audience member laughing, that anxiety of playing principal has seeped into my every performance as principal.

When I had a fixed mindset, the only way to ensure that a failure like this performance would never happen again was to only perform as a second bassoonist. Now that I have a growth mindset, I ensure that a performance like that never happens again through better practice methods: I study the score to realize where my part fits into chords, practice my notes with a drone pitch to improve my intonation, and ask to work on my part with other musicians outside regular rehearsal. With a growth mindset, I learn from my mistakes in performance, establish better practice methods, and through this learning experience, become a better bassoonist.

Why did this one failed performance define my mindset when I have also experienced successes? For example, when I performed principal bassoon on Tchaikovsky's *Symphony No. 6*, a symphony that opens with a famous bassoon solo, I was extremely proud of my performance. Why didn't an extremely positive performance give me the confidence I needed to perform as a principal bassoonist and establish a growth mindset towards my playing? This thought behavior of connecting to failure rather than success is an example of a fixed mindset and is a topic of research for Diener and Dweck. In one study, children would "perform a task on which they encountered a series of successes and then a failure," and the children were asked to verbalize "what they were thinking about as they performed the task."⁷⁶ Diener and Dweck found that the statements offered by children with fixed and growth mindsets were indistinguishable during the series of successes. It was not until the children failed that the distinction between the two groups

⁷⁶ Diener and Dweck, "An Analysis of Learned Helplessness," 941.

emerged. An example of a growth mindset statement after a failure is, “I was doing well before, so if I slow down and concentrate I’ll get it right again.”⁷⁷ In comparison, fixed mindset children made statements such as, “I’ve never been good at this sort of thing,” even though only minutes earlier, they were able to complete the task.⁷⁸ Diener and Dweck found that success for children with a fixed mindset “was *not* sufficient in itself to buffer the effects of failure” and the children were less likely to see their successes as “relevant to future performance.”⁷⁹ In contrast, the children with a growth mindset saw “their successes as predictive of future successes, even after failure.”⁸⁰

Failure is a part of being human. Whether it be a physical setback, as we see in Alex Klein’s story, or a performance setback, as we see in Jordan’s, Kastor’s and my own stories, it is one’s mindset that determines how one reacts to a setback or failure.

⁷⁷ Diener and Dweck, “An Analysis of Learned Helplessness,” 941.

⁷⁸ *Ibid.*, 941.

⁷⁹ *Ibid.*, 941.

⁸⁰ *Ibid.*, 941.

CHAPTER IV: ANALYSIS OF DIFFERENT KINDS OF FEEDBACK

In chapter 2, I discussed individuals and how their fixed or growth mindsets affect how they handle setbacks and failure. This chapter will discuss how the fixed and growth mindsets respond to internal and external feedback. This dissertation refers to internal feedback, internal dialogue, and self-talk interchangeably as the internal thoughts many people experience during daily activities. Eloise Ristad says in her book, *A Soprano On Her Head*, that during this internal dialogue, we often tell ourselves lies and half-truths, such as “I can’t play *that* fast, I can’t play slow music well. I can’t hit that high note without clutching.”⁸¹ Everyone experiences an internal dialogue, both positive and negative; however, when one begins to identify with their limiting thoughts, then the internal dialogue becomes detrimental to continual growth and learning, and leads to a fixed mindset with reference to one’s abilities.⁸² This chapter will discuss the ways in which coaches in music and in athletics help their students separate from their limiting beliefs.

Dweck says, “Whether they’re aware of it or not, all people keep a running account of what’s happening to them, what it means, and what they should do.”⁸³ Fixed and growth mindsets frame one’s running account in different ways. The running account and internal dialogue of the fixed mindset focuses on judging oneself and others, such as, “this means I am not smart” or “this means I am not talented.”⁸⁴ In contrast, the growth mindset’s running account is not of judgement but more centered on “learning and constructive action: What can I learn

⁸¹ Eloise Ristad, *A Soprano On Her Head: Right-side-up Reflections on Life and Other Performances* (Moab: Real People Press, 1982), 10.

⁸² See Deena Kastor on pp. 23 and 25-26 for real life examples.

⁸³ Dweck, *Mindset*, 225.

⁸⁴ *Ibid.*, 225.

from this? How can I improve?”⁸⁵ Therefore, adopting a growth mindset is the way for self-improvement.

While teaching a workshop, Ristad had a student who “went to great lengths explaining how difficult it was for him to play slow music [on the piano].”⁸⁶ The student then played an *Adagio* movement from a Beethoven piano sonata, and sure enough, he had trouble playing slow music. For Ristad, “it became apparent that his need to prove his original statement was more important to him than the need for change.”⁸⁷ The student may very well be proving his original statement, however, there is more to the situation. The desire to prove his statement has stuck him in his fixed mindset.

Many authors suggest detaching from the internal dialogue to avoid a fixed mindset. Often while playing bassoon, I have the desire to mute my internal dialogue: the constant feedback distracts me from focusing on the music. However, to mute an internal dialogue is an unrealistic goal for me. Instead, sports psychologist Dr. Michael Gervais suggests establishing a relationship with the internal dialogue through a three-step process: 1. increase awareness of your thoughts, 2. ask why you are experiencing these thoughts, and 3. make a decision about what one might do about it.⁸⁸ Through this process, one no longer identifies with one’s thoughts. Instead, the thought becomes separate and one is able to make a choice of believing the thought or not. Ristad teaches students to separate from their internal dialogue through visualization. She has her students visualize their thoughts as judges in a circle surrounding them. Ristad says that

⁸⁵ Dweck, *Mindset*, 225.

⁸⁶ Ristad, *A Soprano On Her Head*, 7.

⁸⁷ *Ibid.*, 7.

⁸⁸ Rich Roll, “In Search of Mastery with Dr. Michael Gervais: How to Develop a High Performance Mindset,” *The Rich Roll Podcast*, May 13, 2018. <https://soundcloud.com/richroll/rp366>.

“in the center of our circle, we can look around at each judge with a sense of detachment and curiosity and find out what each one is telling us.”⁸⁹ Through this detachment, Ristad says that “we can lessen the power of these nagging thoughts... and even come to terms with them and find the good in them.”⁹⁰ With a fixed mindset, the basis of the internal dialogue is in judgement. Judgement through negativity stifles the ability to learn. Therefore, the growth mindset is much more ideal for learning.

A personal internal dialogue of mine is, “I will never be able to double tongue.” This is a quick all-or-nothing thought based in a fixed mindset, which leads down a rabbit hole of other thoughts such as, “I will never win an audition, because I can’t play *The Marriage of Figaro* up to performance tempo—because I will never be able to double tongue.” This thought is grounded in reality, for nearly every orchestral bassoon audition includes *The Marriage of Figaro* on their excerpt list. Not being able to double tongue and play the excerpt at performance tempo is a reason to be cut from the audition process. Through the Gervais method of detachment, I can work through this fixed mindset. I have to ask myself, what am I going to do about it? I have to realize that my thought process has been harsh because my double tonguing has improved, and I am very close to mastering the technique. Practicing the technique daily would solve this problem, instead of only practicing the technique when I have an audition in the near future. The fixed mindset thought, “I’ll never be able to double tongue” is then transformed into a growth mindset thought, “I am unable to double tongue today, but with daily practice, I will be able to double tongue in the near future.”

⁸⁹ Ristad, *A Soprano On Her Head*, 13.

⁹⁰ *Ibid.*, 13.

Feedback for someone with a fixed mindset either proves or disproves that they have their innate and unchangeable quality, and feedback for someone with a growth mindset is an opportunity to learn and grow. Evaluations and feedback are a constant in everyday life for a musician: a tuner saying you're sharp, the applause after a performance, and even a simple "thank you" signaling the conclusion of an orchestral audition. In defining a growth mindset, Dweck emphasizes that the mindset is based on the belief that "your basic qualities are things you can cultivate through your efforts, your strategies, and help from others;" *help from others* is external feedback.⁹¹ The way in which someone receives and internalizes external feedback is one of the fundamental differences between the fixed and growth mindsets.

Douglas Stone and Sheila Heen, lecturers at Harvard Law School, discuss how receiving feedback affects personal improvement in their book, *Thanks for the Feedback*. Stone and Heen say, "Feedback sits at the junction of two conflicting human desires: we want to learn and grow but we also want to be accepted and respected just as we are now."⁹² This tension can explain why some people take feedback personally and may not want to improve, because they desire to be accepted just as they are. Whether a musician receives feedback well or poorly, Stone and Heen believe "the ability to receive feedback well is not an inborn trait but a *skill* that can be cultivated."⁹³ By learning how to receive feedback well, a musician can cease interpreting it as a negative attack on their playing, and instead interpret it as an opportunity for them to learn and grow.

⁹¹ Dweck, *Mindset*, 7.

⁹² Douglas Stone and Sheila Heen, *Thanks for the Feedback: The Science and Art of Receiving Feedback Well* (New York: Penguin Group, 2014), 8.

⁹³ Stone and Heen, *Thanks for the Feedback*, 8.

Competition, another form of external feedback, shows that hardship and failure can motivate people to improve. However, I believe that it can lead to a fixed mindset, for competitions imply that the single best performer makes everyone else seem like a failure. Chris Hildrew, author of *Becoming A Growth Mindset School*, says that when “individual success is only measured relative to the success of others, then achievement is beyond the locus of control of the individual; you can’t control how well someone else does, only how well you do.”⁹⁴ In Hildrew’s opinion, “achieving a personal best, rather than beating the opposition, should be the goal of each competitor.”⁹⁵ With competition, the differences in the mindsets are shown through how one defines success. Within the growth mindset, success is based on improvement, no matter if the person placed first or last in the competition. In contrast, within a fixed mindset, success in a competition is based on comparison to others, which will most likely lead to the feeling of failure more often, as well as not realizing how much improvement has taken place.

Self-improvement does not matter within the fixed mindset, because in competition, the outcome is the singular focus, as we see in Kastor’s story when she placed sixth in the National Championship race.⁹⁶ All that mattered to her was the result of not winning the race. Her disappointment in the outcome created a tunnel vision which focused only on her losing. If she had improved and accomplished a personal best time on that racecourse, she did not notice and probably would not have cared because self-improvement was not good enough. The only thing that mattered to her was the outcome of not winning the national title. Through Kastor’s story, the harsh all-or-nothing criteria for success in competition within the fixed mindset is shown.

⁹⁴ Hildrew, *Becoming A Growth Mindset School*, 28.

⁹⁵ *Ibid.*, 28.

⁹⁶ See page 24.

Her internal dialogue and self-criticism is harsh after she does not place first in the race: “*Your best isn’t good enough.*” “*Maybe you’re just not that talented.*”⁹⁷ However, in her memoir, Kastor’s internal dialogue never goes as far as identifying with the outcome, such as, “I am a failure,” as we see in ego-involving feedback with students receiving marks and grades for their schoolwork.

The fixed mindset attempts to link the performer with the type of external feedback they receive. Hildrew says that “ego-involving feedback” creates a connection between the learner’s identity and the outcome of their work, such as, “I am an A student.”⁹⁸ Research shows that for feedback to be effective, it must be “task-involving feedback” where feedback is focused on specifically what the individual needs to do to improve.⁹⁹ Hildrew says,

It is clear to see the connections between ego-involving feedback and the fixed mindset. This ego-involving, mindset-fixing feedback can be given with the very best intentions... We want to make children feel good about their achievements. However, if we really want them to improve, we have to focus them on the process and strategies they need to use in order to make those improvements, and we have to instill in them the approach and self-discipline to make that stick.¹⁰⁰

Teachers and mentors giving task-involving feedback is a step in the right direction in terms of establishing a growth mindset in students. However, we live in a world where grades and standardized tests determine if a student is accepted to a college or university. Such established systems are difficult to change on a student-teacher level.

Stone and Heen suggest that we “*learn* to hold our identity in ways that make us more resilient” through no longer attaching ourselves to simple identity labels, such as “I am an A

⁹⁷ Kastor and Hamilton, *Let Your Mind Run*, 71–72.

⁹⁸ Hildrew, *Becoming A Growth Mindset School*, 28.

⁹⁹ *Ibid.*, 28.

¹⁰⁰ *Ibid.*, 28–29.

student.”¹⁰¹ This simple identity is not resilient, for when this student receives their first B, their identity of being an A student is no longer true. Instead, “I am” identity statements should be shifted into more complex alternatives. For example, “I am a musician” is then shifted into, “I play music.”

In Dweck’s research, feedback has three types—intelligence-focused: “that’s a really good score; you must be really smart at this;” process-focused: “that’s a really good score; you must have tried really hard;” and neutral: “that’s a really good score.”¹⁰² In intelligence-focused feedback, the feedback implied that the child was successful because of their innate talent. In process-focused feedback, the message was that the adult valued the process: their strategies for solving the problems, their effort, their focus, their persistence. The neutral feedback formed the control group in the experiment: their success was noted, but not attributed to any particular quality.¹⁰³ In an experiment, Dweck studied how these three different types of feedback affected children. The results of the children who received neutral feedback were divided equally between wanting to complete a more challenging or easier test.¹⁰⁴ However, when the children were given intelligence-focused feedback, over two-thirds of children chose to complete an easier test instead of challenging themselves with a more difficult one. In comparison, 90 percent of the children who were given process-focused feedback chose the more challenging test.¹⁰⁵

¹⁰¹ Stone and Heen, *Thanks for the Feedback*, 185.

¹⁰² Hildrew, *Becoming A Growth Mindset School*, 5.

¹⁰³ *Ibid.*, 5.

¹⁰⁴ Claudia M. Mueller and Carol S. Dweck, “Praise for Intelligence Can Undermine Children’s Motivation and Performance,” *Journal of Personality and Social Psychology* 75, no. 1 (1998): 36.

¹⁰⁵ Mueller and Dweck, “Praise for Intelligence,” 36; Hildrew, *Becoming A Growth Mindset School*, 5.

A musician's life is surrounded by feedback. Studio or repertoire class at a music school is where students perform the repertoire they have been working on for other students who are majoring in the same instrument. Usually after a student performs, the students and teacher give feedback on what went well, and what could be improved on the performance. This creates a great learning environment for students in giving them the opportunity both to perform and to teach. It can also be an environment of performance anxiety for people who do not take feedback well, because not only do you have to worry about negative feedback, you have to worry about how your fixed mindset will internalize the feedback that is given. One of the comments from my fellow bassoon students that highlighted my fixed mindset was, "That was much better than last time." At the time, my fixed mindset would translate this positive comment to, "Your last performance was a failure, but this performance was less of a failure," which is not what the person was saying at all. My fixed mindset had emphasized the negative instead of the positive. Unfortunately, we cannot change how people give us feedback. We can change how we perceive the feedback, and frame it in a way where feedback can be constructive and motivating. Dweck says that feedback for people with a fixed mindset "makes other people into judges instead of allies."¹⁰⁶ From the standpoint of a fixed mindset, I viewed all criticism as negative. With a change to a growth mindset, negative criticism is turned into opportunities to become better.

What would happen if I performed in studio class and the only feedback I received on the performance were positive? Would I learn anything from this feedback? Would praise encourage me to work harder towards my next performance? To understand how feedback motivates students, Dweck conducted a survey in which some students were praised on their ability and others were praised on their effort. In this study, Dweck says,

¹⁰⁶ Dweck, *Mindset*, 67.

Both groups were exactly equal to begin with. But right after the praise, they began to differ. As we feared, the ability praise pushed students right into the fixed mindset, and they showed all the signs of it, too: When we gave them a choice, they rejected a challenging new task that they could learn from. They didn't want to do anything that could expose their flaws and call into question their talent.¹⁰⁷

Hildrew says that to encourage a growth mindset in students, “feedback should at all times carry the message that we value process, strategy, effort, focus and persistence. We should avoid phrases that suggest we value intelligence or natural ability.”¹⁰⁸ For humans choose to not work when they do not have to. If a music student does not practice for their private lesson, and yet, the teacher says, “good job,” then the behavior is enforced to not practice. The student thinks that they can get by with minimal effort, and still receive positive feedback. Therefore, a growth mindset is a greater attribute than a fixed mindset.

¹⁰⁷ Dweck, *Mindset*, 72.

¹⁰⁸ Hildrew, *Becoming A Growth Mindset School*, 7.

CHAPTER V: STRATEGIES FOR SWITCHING YOUR FIXED MINDSET TO A GROWTH MINDSET

In previous chapters, I have evaluated and researched the fixed vs. growth mindsets. It is the position of this paper that the growth mindset is preferred. I know what it is like to experience the transition from a fixed to a growth mindset in my own musical practice. In the past, I had allowed myself to be defined by a poor performance, which is an aspect of a fixed mindset; and then I was able to develop a growth mindset and allow myself to be much more confident in playing principal bassoon. In this chapter, we will discuss how to cultivate a growth mindset from the solutions of my own experience. Ideas discussed in this chapter include:

- noticing the type of internal dialogue and motivation one experiences in the practice room
- receiving feedback in rehearsal through separation
- cultivating a growth mindset before and after a performance

Now that you know the basic information on the fixed vs. growth mindsets, this chapter will guide you through the transition from a fixed to a growth mindset. By connecting with this knowledge, you can better understand what you believe about yourself and whether these beliefs belong to a fixed or growth mindset. In this transition, only you are changing, and so you must focus on yourself, rather than others. A change to a growth mindset means a change in how you view *your* abilities, *your* potential, and *your* practice. Because a change in mindset can affect your behaviors and products, be prepared for this to change your goals and outcomes as well.

Since practice and a change in mindset occur alone, the change in a musician's mindset fits well into the lifestyle. While practicing, bring awareness to how you talk to yourself. Notice if your internal feedback is based on criticism (fixed mindset), or more on the process of the

work in practice (growth mindset). What was your motivating factor in stepping into the practice room? Answers to this vary based on your mindset. Are you practicing your scales for a scale exam that is happening in the near future? This motivation is linked to the outcome of an exam and to prove your ability, which is based in a fixed mindset. Or are you practicing scales consistently regardless of an exam? If you are practicing scales regardless, then you are practicing to improve your ability and are motivated by a growth mindset. When the motivation for practicing shifts from proving your abilities to improving your abilities, then the shift to a growth mindset has started.

Making music is communal, and therefore, the music we practice alone in a practice room will be rehearsed among other musicians. When someone else hears the music we have been working on, they usually will have feedback to give on how to improve. When receiving feedback, take into account the circumstances under which the feedback is given. Everyone is working towards the best possible performance in a rehearsal and there is a finite amount of rehearsal time to reach that goal. Try not to take the feedback too close to heart, and know that this feedback is for the goal. Therefore, if feedback is fast and abrupt, understand that it was because of the circumstances of not having an unlimited amount of rehearsal time.

With the understanding of everyone working towards the best performance possible, work on not receiving feedback so personally. If you often take feedback to heart, know that you are not alone, and undoing that tendency is a skill that you can learn with practice and separation from yourself. One way to practice this skill is to surround yourself with harsh feedback. Through consistently seeking out and frequently receiving harsh feedback on your performance, you will learn to not take it as an attack on you. When harsh feedback occurs consistently, then that reception becomes the new normal. When this transition occurred for me, I found myself

wanting people to skip the positive feedback of what went well and jump to the feedback of what needs to be worked on for the next performance. As an exercise in empathy, put yourself in the feedback giver's position and try any number of exercises to transform external feedback into something that will motivate you to continue to work harder. In the transition to a growth mindset, harsh feedback stops being seen as personal, but as the opinion from someone you respect of what could be improved. One of the greatest aspects of rehearsing with other musicians is that we are no longer alone in a practice room relying on ourselves to improve our performance; instead, we are in a communal setting where everyone works towards improving together. With a growth mindset, a rehearsal with feedback is an opportunity to learn and grow individually and with the ensemble.

Often in rehearsal, you will have to discern between helpful and unhelpful feedback. An exercise that helps this process, without creating excuses for yourself, is separation. An exercise of separation does not mean that you create external excuses for why you are receiving harsh feedback. This separation means separating from your emotions to focus on the words being expressed. Along with learning how to receive feedback well and not personally, also know that you are allowed to disregard bad feedback. If the goal is to always be working towards improvement, and the feedback you receive does not help in the process of getting better, then the feedback can be disregarded. The more you play, the better you will become at discerning good feedback from bad feedback.

Practices and rehearsals culminate in a performance. The moments before a performance are crucial, because nervousness can cause a thought process based in a fixed mindset. When I had a fixed mindset, often before a performance I would worry myself crazy. I could not focus on what I could do well, because all I could think about was messing up. This thought process is

based in a fixed mindset, because it is focused on the outcome of a performance. If you experience these thoughts before a performance, then remind yourself of the parts in the music that you are really looking forward to performing. If you spend the time before and during a performance worrying, then you are going to miss the performance, even the parts of the music that you enjoy, because you are not being present in the task at hand, and are instead worrying about the past or future.

Prior to the principal oboist playing the tuning A before a performance, it is important to tune into a growth mindset. Another technique for tuning into the growth mindset before a performance is the three-step process Gervais coaches for separating from an internal dialogue.¹⁰⁹ Ask why you are experiencing this thought, and be very specific about why you are feeling this way before a performance. Is someone in the audience making you nervous? Is the music you are performing really difficult? There are many different routines that people do to get into the right frame of mind before a performance. Athletes usually have a pregame routine, so establish one for yourself. By tuning into your growth mindset before a performance, the nervousness regarding the outcome of a performance is shifted to the enjoyment of the process of performing. Performing music live is about being present in the moment, for there are no multiple takes to correct mistakes, or post-recording processes for pitch or other corrections. The process of “playing live” allows for there to be mistakes, because it is humans who are playing the music. If you can overcome the fixed mindset, then you will be able to enjoy the process of performing live music rather than worrying about the product of your performance.

What if your performance went well? What happens when a performance goes poorly? Upon completing a performance, ask yourself: “What went well? What could have gone better?”

¹⁰⁹ See page 32.

If answering these questions is difficult because reflecting on your performance is only based in harsh criticism, you may be working from a fixed mindset. A growth mindset allows for disappointment, and learning from poor performances in order to grow and become better for the next. After a performance, ask for feedback from your teacher or a colleague whose opinion you respect. Through these questions on your performance, take notes, and apply what you have learned to the next performance whether it is the same music or new.

Of course, musicians also experience negative emotions, specifically when a performance does not go well. Look to Vigil's coaching, after Kastor placed 20th in her first professional race: he was *glad* that Kastor was upset with how the race went, because her emotions showed that she was invested in running.¹¹⁰ Apply this coaching to your emotions, and know that it's okay to be disappointed and upset with how your performance went, because it means that you care about music. Once the emotion of a poor performance starts to get attached to your identity as a performer, then a fixed mindset is taking over. One bad performance does not end or define your career, so do not allow a fixed mindset to suggest so. Look to how my failed performance defined me as a bassoonist.¹¹¹ This performance is not a happy memory but it was a learning experience. Learn from the experience and move forward by working on giving a better performance next time.

Remember that what you are working towards in your music career is the big picture. What is your end goal? We are often driven by our current goal—an upcoming recital, performance, or audition—and often fail to remember what we are working towards in the big picture of our careers. What is your life goal—a music teacher, a college professor, or a member

¹¹⁰ See page 26.

¹¹¹ See pages 26–28.

of an orchestra? Once you are done studying music in school, know that there will be no more grades. How will this affect your motivation?

CHAPTER VI: CONCLUSION

This dissertation applied the concept of a fixed vs. growth mindset to musical performance, showing that while a fixed mindset is common among musical performers, a growth mindset should be an achievable and, in the author's opinion, superior approach. Suggestions were presented to try to achieve this goal. A part of what makes us human is that we do not act on instinct alone, but we want to improve. Towards the end of her book, Dweck states that "the growth mindset is based on the belief in change."¹¹² It is best to think of thought patterns as habits, which can be changed and altered over time. We can take control of our habits through intensive practice.

Chapter 1 outlined the origins of the concept, specifically how they were discovered through Dweck's early research in how children cope with failure. Her research in children and first-year college students was discussed, as well as the self-handicapping behavior of the fixed mindset. It discussed the 10,000-hour rule through the writing of Malcom Gladwell as well as the study of violinists at the Academy of Music in Berlin conducted by Ericsson, Krampe, and Tesch-Römer, which proved that the more hours a violinist practiced, the higher they were ranked by their teachers. Before Dweck used fixed vs. growth mindsets, she identified them as learned helplessness vs. mastery-oriented. Learned helplessness was first discovered in dogs in the Maier and Seligman study.

Chapter 2 applied the concept of the fixed vs. growth mindset to broader case studies. Growth after setbacks was shown through Michael Jordan and Alex Klein, and the journey from a fixed to a growth mindset through Deena Kastor's professional running career. Her journey to a

¹¹² Dweck, *Mindset*, 223.

growth mindset was helped through her professional running coach, Coach Vigil as well as his coaching philosophy, which advocated for a growth mindset.

Chapter 3 discussed internal and external feedback within both fixed and growth mindsets. The differences between the mindsets are that a fixed mindset's internal dialogue is based in judgement while a growth mindset's internal dialogue is based in learning and improvement. Sports psychologist Dr. Michael Gervais and author Eloise Ristad suggest detaching from the internal dialogue through an exercise of separation. Receiving external feedback is a constant for a musician, so it is more beneficial to have a growth mindset than a fixed mindset because a growth mindset turns feedback into opportunities to grow.

In Chapter 4, cultivating a growth mindset in one's own musical practice was discussed. From practicing alone in a practice room to working with other musicians in a rehearsal, and before and after a performance, the process of cultivating a growth mindset while experiencing internal and external feedback was discussed.

At this moment, I have two different avenues for further research. The first topic for future research is the mindset of first-year music majors. I was inspired by reading studies of first-year law students and medical students who are high-achieving individuals. They would then experience a shift towards a fixed mindset when they started their specialty school because everyone in their class was a high achiever. I hypothesize that this shift occurs in music schools as well. Music majors are often the most accomplished musicians in their high school, and once they start studying at a music school, they are then surrounded by accomplished musicians.

It would be interesting to see if there is a mindset change during the first year of being a music major which is caused by the curriculum. A music major's class schedule includes not just performance, but also academic classes, including private lessons, repertoire class, written

theory, aural theory, history, ensemble rehearsals, and piano class. There should be a study to see if the academic side of studying music has an effect on a student's mindset during their first year of studying, when they are used to having music be a small portion of their class schedule in high school.

The consequences of a fixed mindset limit one's potential. That much is supported by the research contained in this dissertation. At the very least, a growth mindset is more beneficial to performance than a fixed mindset. Those with a growth mindset are not limited by a fixed mindset and can actively pursue their full potential.

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