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Chronic Stage Anxiety Re-Examined:

An Integrative Approach for the Twenty-First Century

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requirements for the degree

Doctor of Musical Arts

by

Natalia Kartashova

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ABSTRACT OF THE DISSERTATION

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An Integrative Approach for the Twenty-First Century

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Doctor of Musical Arts

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Professor Robert Winter, Chair

Stage anxiety has existed as long as humans have performed for one another. The fifteen self-help books surveyed for this study contain a wealth of practical on-site tips and strategies, most centered around the time of the performance. But for the upwards of fifty percent of stage-anxiety sufferers for whom this condition is chronic, these books offer little relief.

Chapter 1 frames the discussion of stage anxiety around personality development, which enables a more comprehensive definition of stage anxiety while also introducing the concept of emotional memory. Chapter 2 links the learned suppression and control of emotions to the detailed scheme of personal psychosocial evolution proposed by the German-born developmental psychologist Erik Erikson.

This sets the stage for a discussion in Chapter 3 of a dozen current therapies used by the medical community to treat anxiety disorders, ranging from Alexander Technique to Cognitive Therapy (CT). To these I add the only current anxiety therapy that actually looks into a patient's background—the eighteen schemas identified in the 1990s by Dr. Jeffrey Young. I argue that the "characterological" issues addressed by Dr. Young have a powerful connection (one that Young

does not make) to stage anxiety. Emotional deprivation, fear of abandonment, defensiveness, vulnerability, etc. are all certain to accompany every affected performer onto the stage.

Chapter 4—the heart of the thesis—synthesizes the many scientific advances over the last forty years in our understanding of how anxiety works at the brain, neurological, and even cellular levels. Current science teaches us that the "information" in a memory is stored right along with the "emotion" associated with that memory. Whenever a particular memory is triggered, our entire body "remembers" both the emotion and the information virtually seamlessly. This is why on-site interventions have little chance of succeeding.

Chapter 5 describes the circumstances of my growing up first in the old Soviet system of music education, and then being switched abruptly in my mid-adolescence to the post-1989 Russia in which self-preservation was often conflated with naked self-interest. When I traveled to America the traumas I experienced in these two worlds boarded the plane with me. I conclude the chapter with a detailed account of the potential land mines in a sample piano recital program.

The Epilogue offers the broad outlines of an original treatment program that has the real potential of helping chronic sufferers gradually replace chronic fear of stage performance with enduring joy.

The dissertation of Natalia Kartashova is approved.

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Chapter 1

Setting the Stage

This is a study both broadly intellectual and deeply personal. It addresses a phenomenon—stage anxiety—that is known in one form or another to almost every performer who walks onto a stage. "Anxiety" as a psychological phenomenon can be seen in the bust of the Roman Emperor Decius, whose reign (249-251 C.E.) lasted only a few short years. So much has been written on the broader subject of anxiety and the more focused one of stage anxiety that it would seem superfluous to add any more to the discussion.

Yet as the following pages and chapters attempt to show, while science has whittled away at the root causes of anxiety-based behavior, and while a surfeit of self-help books seems to address the topic of stage anxiety from every conceivable angle, a great wall of silence surrounds what I may lie at the root of this crippling phenomenon. Stated in its barest form, this may be related in many cases to childhood trauma—something that is often years or even decades removed from the actual stage anxiety faced by a performer.

Teasing out the relationships between childhood trauma and stage anxiety requires a full consideration of how humans function, from our DNA to our learned patterns of response. It involves an assessment of what both science and a sizeable self-help literature have contributed. It requires bringing all of these elements together into a fresh model. To set the stage, I begin with my own summary of the myriad factors that underlie the formation of how we are in the world—in short, our personalities. We also need to arrive at a clear definition of the "performer," of what constitutes "stage anxiety" in its most elementary form, and the fundamental role that "memory" plays in the lives of all performing artists. Once that framework is established we can proceed to a full examination of how stage anxiety is born, how it takes root and functions, and how we might ultimately neutralize its paralyzing curse.

Five Contributors to Personality Formation

Musical performance ranks among the most powerful means of individual expression, encompassing emotion, imagination, intellect, taste, and style—indeed, all the dimensions that life offers. If we assume for the moment the most sound musical education—including a deep knowledge of musical language, conventions, historical performance styles, and sound production—then we can readily agree that all of these skills are prerequisites for a great artist. Yet without all of the qualities cited in the first sentence, they produce only a good or even an average performer who simply knows how to handle an instrument. Serious artists approach their craft daily with the understanding that what they seek can never be fully realized. Yet simultaneously they understand that they are travelers on a perpetual path of self-discovery whose challenges never dim. These are the artists whose interpretations remain stamped on us.

This process of individual formation counts as one of the most profound mysteries of creative life and merits close scrutiny at the beginning of any examination of stage anxiety. For when a performer takes the stage, it is at that moment that all of the qualities cited above either come together in some transformational way or work against each other. Hence stage anxiety is not simply about calming nerves or reciting mantras but about addressing the entire person at all levels. I identify five stages that move from the broadest considerations to the most individual dimensions of human personality formation.

We begin with genetics. Inherited qualities such as aptitudes or physical abilities affect not only the personality of individuals and the ways they perceive the world but also how they appraise other people. Since, from the perspective of biological heredity, two perfectly identical persons—even in the cases of identical twins—do not exist, heredity provides the fundamental baseline gauge for distinguishing one individual from another. While we can debate indefinitely the "nature [DNA] vs. nurture" extremes of any human behavior, we can all agree that our inherited DNA plays a significant, and sometimes determinative, role. We can also agree that this is an area where we have absolutely no say in, or influence over, our individual

predispositions. They are given to us in a manner that, while reflecting all of the genetic strands that have led up to us, retain a certain air of mystery. But they are nonetheless rooted in our genetic makeup even if science has not yet identified all the elusive markers of personality formation.

The second factor influencing the formation of individuals is their geographical environment. If you grow up in surroundings blessed with twelve days of sunshine a year combined with six months of wilting humidity, six months of deep snow, and sub-freezing temperatures (as in St. Petersburg, Russia), you will have a profoundly different outlook on life than the person born in southern California who suffers through twelve overcast days annually. As writers such as Jared Diamond have argued, climate has exercised a profound effect on the rise (and fall) ofcivilizations.1 His generalizations about society apply equally to the individuals who make up that society.

No less powerful is the third component, which we can describe as basic cultural forces. To be sure, the values and practices of a society often grow in no small measure out of their physical environment—for example, the more stoical acceptance in severe climates of discomfort, the greater value placed on relaxation in warmer climes. Yet individual cultures develop many layers of values whose causes go far beyond the immediate environment. Attitudes toward personality, behavior, education, sexual fidelity, achievement, work ethic, and family attachments all vary widely from one culture to another. In spite of more than a century of anthropology, there are today still no easy explanations for the values that undergird individual cultures. Yet there is no doubt that these values exercise a deep and lasting effect on everyone who grows up within them. As a simple example, a person raised in a culture that privileges submissiveness will approach almost every human activity differently from a person raised in a society that touts self-confidence and entrepreneurship.

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1 Jared M. Diamond, *Guns, Germs, and Steel: The Fates of Human Societies* (New York, N.Y.: Norton, 1999).

A fourth and more individualized extension of cultural forces is what we might call our social environment. If you grow up in a highly competitive society that assigns great value to education, for example, you probably will internalize these values at a young age. If you grow up in a society that places the greatest value on conformity and acceptance, you might be predisposed to value the same things in adulthood. Children figure out early on what behavior is acceptable, and to a considerable extent they develop values that reflect the majority behavior. Every human craves acceptance by what they perceive to be their own social group. Acceptance is often tied to fear of societal disapproval, including the withholding of love in critical relationships such as that between parent and child.

Moving finally to the most immediate and specific, the fifth and final factor in the formation of an individual in modern society lies in the specific experiences of that person. Even within highly conformist cultures, every individual experiences individual events in a particular way. Behind this particularity is a certain maddening randomness over which we have no seeming control. For example, one in five children in America, regardless of their socio-economic standing, grows up in an abusive household. If you draw this short straw, you might be at risk of developing pessimistic expectations from life.

Since children are generally inexperienced in deliberately choosing positive thoughts or explain one's violent behaviors, they intuitive conclusions about life are based on the way they feel. Hence, children that grew up feeling emotionally comfortable more than likely will be able to see more positive things, since there were no previous negative references in their memories and their subconscious mind is not searching for negative confirmations. If you are one of the eighty percent not so cursed, you will enter adulthood with a much more optimistic outlook.

You may be a survivor of Hurricane Katrina or a 6.5 earthquake; or you may have grown up on a bucolic farm where you developed a strong and positive bond to the earth. You may have lost at a very young age the grandparent to whom you were closest; or you may have enjoyed the nurturing of that grandparent until you were in your twenties and more prepared to deal with

their passing. You may have had a transformational teacher in third grade, who infected you with a lifelong love of learning. By the same token you may have had a stern and unsympathetic teacher who overwhelmed your relationship to learning with fear and dread.

To be sure, none of these five categories are discrete entities with bright-line divisions between them. They are rather points along a continuum, each contributing in its own interrelated way to our overall development. They each share the characteristic that they are imposed on us; we have virtually no say over their existence or the power of their force fields. They impinge directly on our personal formation.

The awareness of these forces and the ability to understand them clearly, perhaps comes with experience and allows to avoid their undesirable outcome of these forces is this: It is only to the extent that we become aware of all of them—and down to the finest detail—that we have the chance to escape from their otherwise iron grip. In the broadest sense, this is what a so-called liberal education is designed to accomplish. While someone who becomes a C.P.A. or a wine exporter will definitely benefit from the knowledge of contributors to personality dynamics, for a performer this kind of knowledge is a perpetual matter of life-and death on the stage. Indeed, performing in front of others constitutes that arena of life where we are as personalities both most empowered and most vulnerable.

Concepts of Personality

The interaction among the five dimensions shapes our individual personalities, including the seeds to our control of how we develop. There is a certain cruel randomness to all of life's individual circumstances, and everyone has their story. Not only do we each have our own stories but we each create our own individual interpretations of these stories. Our interpretation, call it our *perception*, of past events becomes the expression of our personality, a reliable indicator of how we will behave in, and interpret, future events.

This in no way rules out the possibility that a particularly shocking or traumatic event—either positive or negative—in adulthood can trigger fresh responses in the formation of our personalities. But for most of us, once we have entered young adulthood our personalities are largely formed; we are quick to judge situations. We have not yet been taught the skills required to separate the facts of an event from our own interpretation of that event. We are no longer in touch with the true sources of our stances towards life. When it comes to stage behavior, our personalities and the habitual behavioral responses they contain can lead to repeatedly destructive outcomes.

I have gone to some lengths to describe the factors that underlie personality because it is my unshakeable belief that when we go on stage we carry all five of them—however individually apportioned—with us. Hence any serious attempt to deal with issues of stage anxiety must be holistic in nature and open to the widest possible range of interpretation and remedies.

The concept of "personality", which in subtle and elusive ways reveals itself in artistic performance, presupposes the presence of specific characteristics. The personal attributes we develop in our lives become the engines of consistent behavioral patterns, our persistent reactions to specific situations, and the consistent decisions that we make. Our friends and family come to know—and indeed expect—these patterns. Once our personality is largely formed (which in industrialized Western cultures takes place by the age of twenty), we tend to react the same way to events regardless of their nature.2 However ethical, emotional, or spiritual in its dimensions, an experience that might have been formative when we were ten is now only something to which we respond in a manner consistent with our already formed personality. By responses I mean automatic, "natural" reactions we learned during formative years. These subconscious immediate responses for a long while might still come first, even for those adults who consciously working on changing them.

2 E.J. Phares and W.F. Chaplin, *Introduction to Personality*. Fourth Ed. (New York, N.Y.: Longman, 1997), pp. 8–9.

An integral part of every human's makeup is their relationship to art—that is, to visual images and sounds that are not necessary for the mere sustaining of biological life. Whether aware or not, that person's relationship to a dimension that is about *why* we live rather than *how* we live is always at work, even if a person claims to have no interest in artistic expression.

For artists, the social functions in which they take part—their position within society, their stability and resilience under stress (or duress), —assume even greater importance than in mundane life. Since art plays a formative role in the overall spiritual and cultural development of mankind, and inasmuch as the issue under consideration is one of artistic performance, art as a whole becomes an integral part of the formation of a performing artist. Artistic performance is the way through which individuals can express themselves and in some cases also to reconcile the conflicting forces in both the world around them and within themselves. Consequently, it influences development at every level: intellectual, emotional, moral, and aesthetic.

Who are these "individuals" of whom I speak? For this study I have in mind those persons who are committed to using their personalities in the service of their own time-based artistic expression—itself a blend of native talent, interests, ideas, temperament, and disposition. These are the persons who we refer to as performers.

The Performer

Most research surrounding the performance of classical music is related to issues of musical execution. Musical style, editorial issues, articulation, phrasing, ornamentation, technique,—each of these boasts a healthy and growing literature. All of these dimensions are united by their collective focus on conscious decision-making. Virtually none of them, however, assign any importance to the role of the unconscious.

By the time performers are ready to share a work, they have typically spent hundreds of hours in preparation. All of the ingredients for a high-level performance are now present: technical difficulties are overcome and the program is fully memorized—let the good times

begin! Artists with clear ideas about the music they are playing are fully capable of mesmerizing their audiences. Yet only a very tiny percentage of musicians will ever tell you that any one of their concerts was entirely successful. The way musicians evaluate their performances depends on individual definition of success and awareness of it's provisional state that can be reached at that particular period of time. However, constant dissatisfaction with performances, followed by sense of guilt and self-doubts. It is my profound belief that stage anxiety derives from these self-doubts.

Every performing artist experiences stage anxiety in some form. Some of them experience mostly its positive aspects (such as a high level of concentration and energy, eagerness to be heard and to share their feelings abut the music), while many more artists experience negative ones (confused thinking, nausea, muscle tremor, increased heart rate, etc.) which may result in an uncomfortable or even a disastrous out-of-control experience.

Defining Stage Anxiety

Few writers actually define stage anxiety as such. Or when they do, it is in terms of symptoms such as dry mouth, trembling, dizziness, nausea, etc.. I prefer to define stage anxiety as a physical, mental, and emotional condition in which the high-level functioning that an artist needs for the successful completion of a performance is impaired. Although my experience is almost exclusively within the world of classical music (since performance is "any activity done in front of an audience"), my research could also find applicability outside of the field of classical performance.

At the base of stage anxiety, first and foremost, lie psychological markers. Few societies in today's world do not place an undue emphasis on success through competition. In childhood we already learn that in order to survive in this tough world we need to work hard, become a professional of the highest quality in our chosen field, and earn the respect of (or even be feared by) others. Unfortunately this causes many children to grow up from early childhood with a

distorted view of life, believing that professional standing success is the chief source of happiness and self-esteem.

For example, studying in elementary school in the former USSR, I constantly heard variations on the following refrain: "You must be the best; you must prove to everyone that you have value." In my own case I learned early on that I possessed personal worth only if I met someone's expectations–most often those of a teacher, a parent, etc. At first the meeting of these expectations did not impact my self-esteem or my sense of freedom; in my adulthood, however, I realized belatedly that the roots of my anxiety grew directly out of this childhood. This almost crushing realization and my attempts to address it, have provided a primary motivation for the undertaking of this study.

The fear of failure, of humiliation, of not being good enough as (or being worse than) others, of being incapable of delivering the message contained within the music, as well as simply forgetting the musical text (for those who are required to play from memory)—these are only the most immediate reasons for feeling anxious at the moment of public performance. The higher the importance placed on achievement and the stronger our belief that our audience will love, accept, and respect us less if we do not meet its expectations, the higher the resultant degree of anxiety on the part of the performer.

Yet as this study underscores, a myriad of hidden reasons can trigger stage anxiety as well. The child forced by musician parents to learn how to play an instrument, and who is under constant pressure to practice may realize later on that the life goals he has chosen are not really his, and hence were not the ones he desired. If the parents projected high performance standards, were professionally educated in music, and harbored the most ambitious intentions for their child, they may have ended up developing in the child a perfectionist strain combined with a disproportionate fear of disapproval.

It is difficult to tease apart the effects that parents may have on children to contribute to the development of perfectionism in the child, versus shared heritable factors between parents

and child. Perfectionism may be a trait that could operate independent of parents' influence, although in many cases it is likely an interaction between the effect of the parents on the child, and the child's own perfectionism, which accepts the parents' narrow and rigid views of what is acceptable.

If the primary emphasis was placed on the child's musical achievements, snuffing out all opportunities to develop an interest in anything else, this emphasis almost invariably results in the two major fears that typically cause long-lasting depression or anxiety: that of not being perfect or good enough to handle a highly competitive career; and the fear of not being able to find passion for something else in life, since the only activity the musician had been familiar with since childhood is performing on an instrument.

Emotional Memory

At some point we all confront the reality that we need to take control over our emotions. In order to socialize, even when we are overwhelmed by somebody else's actions or words, we train ourselves to express our opinion and negative reaction in a tightly controlled form. As musicians, once we confront a particular anxiety, we realize that we can at least control our facial expressions, our posture, and attempt to exude confidence.

At the same time we learn about techniques such as Alexander Technique, or different types of yoga that involve physical, mental, and spiritual training. We are fascinated by people who can walk on nails or hot coals, or who can slow their heart rates solely through meditation. We gravitate to the belief that even automatic operations (such as heart rate or blood pressure) can be controlled. Anxiety presents the flip side of a remarkable self-control. According to Dr. David D. Burns:

> "Anxiety consists of both thinking symptoms (worry, fear, dread, anticipation of misfortune, etc.) and physical symptoms. Typical physical manifestations of anxiety include jitteriness, trembling, muscle aches, eyelid twitch, strained facial expression, sweating, heart pounding, dry mouth, clammy hands, upset stomach, frequent urination,

poor concentration, and the feeling of having a lump in your throat—just to name a few."3

Anxiety goes hand-in-hand with certain events, creating a strong memory that contains both the anxious event as well as its physical manifestation. When the brain evaluates/recognizes the situation as traumatic or anxious, the appropriate memory folder is delivered and its chemicals are released.

The human brain functions every second, both awake and sleeping, allowing us to stay alive and to think. One of its most important functions, directly related to the thinking part of the brain, is memory. When we read, something in our brain recognizes the words, searches for the equivalent if the words are not written in our native language, and instantly prompts us to agree or disagree with the reading.

One of the central categories of memory is emotional memory. When we meet an old friend, our brain automatically brings to us the name of that person, perhaps a memory of a recent interaction, and the emotions we associate with that person. Music, fragrance, touch, image all have the power to evoke both the time and place when we first underwent a particular experience. All memories remain with us for a shorter or longer period of time whose length depends on the importance of the event.

Some memories we cherish and bring purposefully to life; others we intentionally suppress; some get referred to a subconscious level beyond our control and intentions. Our brain mimics a mammoth library that contains billions of books we have read: some of them were very interesting and emotionally charged, while others did not touch us very deeply. The awareness of emotional memories and the roles they play exercise a large influence on our level of stage anxiety.

The father of method acting, K. S. Stanislavsky, provided a vivid and multi-faceted account of emotional memory:

3 David D. Burns, *The Feeling Good Handbook* (New York, 1999), p. 209.

> "…Two travelers were caught unawares on a rock, surrounded by the rising tide of the sea. They were rescued and afterwards recounted their impressions. One of them retained in his memory each of his actions – how, where, why he went, where he went down, where he stopped, how he jumped. The other one remembered nothing in that domain, but remembered only his experienced feelings: at first the feeling of ecstasy, then of wariness, alarm, hope, doubt and, finally, a state of panic. Those are the very feelings that are stored in one's emotional memory. Just as in your visual memory before your inner gaze a long-forgotten thing, landscape or the image of a person comes vividly back to mind, so in the emotional memory are previously experienced feelings revived. It would seem that they were completely forgotten, but suddenly there is some hint, thought, familiar image – and once again you are gripped by the remembered experiences, sometimes just as strong as the first time, sometimes weaker, sometimes stronger, the same or in some changed aspect." Images of the emotional memory are always linked to something definite, by their structure—visual, auditory and other pictures in one's mind. Just relying on this link, we can remember our own emotional experiences."4

According to Stanislavsky,

> "…Our feelings and experiences are elusive, capricious, fickle… sight is more easily given to oral description. Its images more freely and more durably etch themselves in our visual memory and arise anew in our performance. Furthermore, visual images of our primary aspiration, despite its being illusory, are still more real, more tangible, more 'material' (if one can express oneself thus about an aspiration), than notions of feelings, unclearly suggested by our emotional memory." 5

For him, the most distinctive feature of emotional memory is the extraordinary richness and depth of penetration into the essence of a feeling:

> "…Each person has seen in his lifetime not one but many catastrophes. Recollections of them are retained in the memory, but not in all details, only in separate features, those that struck the consciousness. Out of many such footprints of past experiences there is one that is formed—a big, dense, broadened and deeper recollection of similar feelings. In that recollection, there is nothing extraneous, only the most essential; it is the synthesis of all similar feelings. It relates not to a small, separate, and particular occurrence, but to all occurrences that are identical or similar and reminiscent of it. That is memory on a large scale. It is often clearer, denser, more compact, richer in content and sharper than even reality itself."6

This study addresses the causalities—both obvious and hidden—behind stage anxiety. I will argue from both the broad literature on the subject and from my own life experience as a performing musician. My goal is nothing less than assisting as many performers as possible who

4 K.S. Stanislavsky, *The Actor's Work on Himself* (Moscow, 1989). "Iskusstvo," Vol. 9, B. 2, p. 144.
5 Ibid., p.147.
6 Ibid., p.149.

struggle with this demon to harness it to their own performing ideals—and in so doing to help myself.

Chapter 2

The Conceptual Roots and Psychological/Physiological Factors Behind Stage Anxiety

Emotions: Suppressed and Controlled

It may seem a stretch to argue that patterns of emotional suppression and control have any bearing on issues of stage anxiety. While I am certainly not the first (it goes back at least to Freud's considerations of the underlying factors behind neuroses) to examine the suppression and control of emotions, my intent here is to bring this enormous everyday force into precisely the arena that seems anything but everyday—performing live in front of others. In the discussion that follows I attempt to demonstrate how accumulated emotional suppression impinges directly and destructively on stage behavior. It seems altogether remarkable that not one of the myriad of self-help books written either by musicians or behavioral scientists (and listed in my Bibliography) ever foreground this psychological reality.

The learned habit of emotional suppression manifests itself on stage in two complementary but equally corrosive ways: on the one hand, it paralyzes the performer with the usual litany of physical symptoms. On the other hand, because of years of habitual emotional suppression, neither your body nor your mind understands that the stage is precisely the arena and the psychological moment where direct emotional expression, unmediated by suppression of any kind, must be instantly available.

It is crucial at the outset to distinguish between the control of one's emotions and the suppression of them. Emotional control involves the managing of involuntary emotions with the aim of restraining them. Emotional suppression involves a conscious decision to prevent or block their outward manifestation in a given situation. Suppressed emotions are not the same as suppressed experiences. Suppressed emotions leave the consciousness rather quickly after

accomplishing their mission—for example, ratining one's composure in a situation with an unpleasant and/or unwanted emotional tinge.

As we emerge from childhood we all face the reality that we must take control over our emotions. In order to behave in a socially acceptable fashion even when we are overwhelmed by the actions of another, we train ourselves to express any resistance in an acceptably controlled manner.

As musicians, once we confront anxiety, we realize that at least we can control our facial expressions and our posture in an effort to project confidence. We may also incorporate techniques such as Alexander Technique or different styles of yoga that involve physical and mental conditioning. We are fascinated by people who can walk on nails or hot coals, slow their heart rate using meditation; we may conclude that automatic functions (such as blood pressure or heartbeat) can be controlled in these ways as well.

Musical performance demands a large number of the most varied skills and abilities. A key one is composure, and with it the ability to regulate one's emotions. To be sure, the ability to control and direct one's emotions depends on the emotional makeup of each individual musician, the level of his training, and the extent of his spiritual resources. Yet in virtually every circumstance, performers can select and project vital emotions in the music to their audience. They can direct these emotions with intensity while not allowing them to overwhelm the clarity of the thought process.

Suppressed experiences generally do not manifest themselves in external expression or situational behaviors. They are nonetheless haunting memories that continue to torment. Most often they are connected with traumatic events, perceived injustices, and unresolved or unfinished situations. Because of the understandable emotional immaturity in our youths we are more able to push such experiences deep inside, since the only way to deal with them is to ignore their presence, to distract oneself, or to "forget."

But they are not forgotten. With the passage of time it becomes clear that suppressed experiences continue to smolder at the subconscious level. In cases where the method for dealing with them remains static (and therefore ineffective) for a long time, they may even increase in intensity. Hence accumulated and suppressed experiences can compromise not only stage performance but our overall quality of life.

Even popular online mental health websites acknowledge the impact of emotional suppression. On the website "MySahana," for example, the anonymous author in the May 16, 2011 edition of "Emotion Suppression: Effects on Mental and Physical Health," writes that:

> "..Research has shown that suppressing or avoiding your emotions in fact can make them stronger. For example, if you are sad because a family member passed away but want to avoid feeling the sadness, you may watch happy movies, try to keep your day as normal as possible and may even talk to friends as if nothing happened. However, the sadness is still present in your mind and a small hiccup in the day may cause you to seemingly overreact to the situation. Even if the object of your emotion is different, this is your body's way of releasing the pent up emotions. Just as emotion suppression is your body's way of protecting you during a trauma, emotion release in a non-traumatic situation is your body's way of protecting itself from further damage. Effects of consistent emotion suppression include increased physical stress on your body, including high blood pressure, increased incidence of diabetes and heart disease. In addition, people who engage in emotion suppression regularly are more likely to experience stiff joints, bone weakness and more illnesses due to lowered immunity. Research has also shown a connection between avoiding emotions and poor memory as well as more misunderstandings in conversations with others. This is because people who regularly suppress emotion are often less aware of the signals they are sending to others and also less aware of the social cues present in daily conversation."[7]

Professional musicians spend a lifetime sharpening their senses in the service of expression. Hence it is deeply ironic that their very sensitivity renders them more vulnerable to crippling stage anxiety than the legions of persons whose livelihoods are largely free of the most exposed forms of performance. With real performing artists, stage anxiety can easily escalate into a crippling paralysis, undermining memory and the ability to focus.

7 http://www.mysahana.org/2011/05/emotion-Suppression-Effects-on-Mental-and-Physical-Health/

Back to Childhood: Erik Erikson's Stages of Personal Development

Erik Homburger Erikson (1902-1994) was a developmental psychologist and psychoanalyst, whose greatest project in his own professional life was the development of identity, and whose theory of psychosocial development of human beings has remained highly influential across the world. Erikson considered the formative years the most influential in the way each of our lives plays out. He assigned a crucial role to the environment in which a child is born and raised, designating it as a source of identity and self-awareness and the best predictor of healthy or unhealthy psychological growth.

Implicit in Erikson's critique is, of course, the emotional component of the psychological models that he constructs. Neither Erikson's stages of personal development nor their emotional components are mentioned in any of the nineteen self-help books (written primarily by musicians and psychologists) or scientific articles (published by psychologists and other behavioral specialists) that I have read in the course of this study. I am proposing for the first time that Erikson's analysis of developmental stages be foregrounded in the study of stage anxiety. While the activity of going on stage may not be an integral part of a child's life until he has passed through more than one of Erikson's stages, that child will carry Erikson's consequences with him onto the stage, however distantly related they may seem initially to the task of performing a musical work before the public.

Severe symptoms of stage anxiety, unrelated to such obvious reasons as lack of preparation, a performer's poor health, or an event linked directly to some specific current circumstances of which the performer is aware, can be linked to specific events embedded deep in our emotions from the earliest age. On stage, the brain recognizes a situation as traumatic or anxiety-inducing, thereby delivering the emotional memory that releases the chemicals triggering typical physical manifestations such as—to name only a few—jitteriness, trembling, muscle aches, eyelid twitches, strained facial expressions, sweating, heart pounding, dry mouth,

clammy hands, upset stomach, need for frequent urination, poor concentration, and the feeling of having a lump in your throat. 8

In Erikson's scheme, each person over his lifetime goes through eight specific crises or conflicts. How a person navigates each stage and adapts himself to it will influence his future character development and worldview. As it applies to this study, an examination of how one passes through each stage can help uncover the hidden reasons for severe stage anxiety or stage fright, and perhaps explain the reasons for other chronic emotional states as well.

Erikson's eight stages are as follows:9

1) Trust and Distrust

In infancy children learn whether the surrounding world deserves their trust. If their needs are met, the attitude toward them is solicitous, attentive, and consistent: small children gain an impression of the world as a safe place worthy of trust. If, however, at the infant stage the world causes pain and stress, a picture will form of its unpredictability, and the feeling of mistrust of the world will endure for a lifetime.

2) Autonomy, Shame, Doubt

Beginning to walk, children discover the potential within their bodies. If at this stage the child succeeds in doing something independently, he gains a feeling of self-confidence and self-control. If the child is deemed to suffer failures, he is either punished for them or is labeled bad or not bright; he may take on lasting feelings of shame and doubt regarding his own physical capabilities.

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8 D.T. Kenny and B. Ackermann, "Optimising Physical and Psychological Health in Performing Musicians" in S. Hallam S., I. Cross, and M. Thaut, *Oxford Handbook of Music Psychology* (Oxford, UK: Oxford University Press, 2014), Chapter 36, pp. 390-400.

9 Erik H. Erikson, *The Life Cycle Completed*. Extended Version with New Chapters on the Ninth Stage of Development by Joan H. Erikson (New York: W. W. Norton, 1997), p. 61.

3) Initiative vs. Feelings of Guilt

At about age 4-5 the exploratory activity of a child extends beyond the body. He learns about the layout of the world and ways of exerting influence through his will. If the exploratory activity is effective, children gain a strong sense of initiative and learn to handle people and situations in a productive way. If, however, they are criticized and their initiative is suppressed, these same children will develop feelings of guilt surrounding many of their actions.

4) Industriousness vs. Feelings of Inferiority

Between the ages of 6 and 11 is the time when children develop skills and abilities at school as well as at home and with their peers. Children now produce an output that begins to be measured. According to Erikson's theory, the feeling of "I" is enriched through the increase of the child's competence in different areas.

5) Identity vs. Confusion of Roles

Before the onset of youth, children learn a range of roles: that of friend, brother, sister, or pupil. It is important to gain an understanding of these roles and integrate them into the whole. At the end of this stage, which encompasses ages 13 to 18, there occurs "a reintegrated sense of self, of what one wants to do or be, and of one's appropriate sex role."10

6) Closeness vs. Isolation

Between the ages of 18 and 40 the conflict between closeness and isolation becomes the central contradiction of development. In Erikson's account, closeness includes much more than sexual closeness: it extends to the ability to give oneself to another without the fear of losing one's own individuality. The successful traversal of this stage depends, of course, on how

10 Erik H. Erikson, *The Life Cycle Completed Extended Version with New Chapters on the Ninth Stage of Development by Joan H. Erikson* (New York: W. W. Norton, 1997), p. 64-67.

previous stages were negotiated. Under ideal conditions it leads to comfortable relationships "… and a sense of commitment, safety, and care within a relationship." On the other hand, a fear of closeness that leads to the avoidance of commitments can lead to isolation and even alienation.

7) Generativity vs. Stagnation

Once previous conflicts have been largely resolved, between the ages of 40 and 65 we can devote our energies to helping others. We begin to take part in the society in which we live, involving ourselves in various organizations and their activities: we rear children, we apply maximum effort to our careers or jobs. Failure to resolve previous conflicts often leads to excessive self-absorption, to an urge to satisfy one's psychological needs—in short, to protect one's peace of mind at all costs.

8) Ego Integrity vs. Despair

After about 65, people review their lives and evaluate them anew, weighing their achievements against their missteps. If a person looking back on his past feels largely satisfied and fulfilled, he embraces his life just as it is. If his life seems largely a waste or a sequence of squandered opportunities, then the outcome is chronic feelings of despair.

All of Erikson's developmental stages can be regarded as periods of life during in which experiences gained by the individual dictate the necessity for the most important adjustments—to both the social environment and to one's own identity. For young musicians the stages of emotional formation take place in parallel with their psychological formation.

With the right teachers children learn how to express emotions that influence in a positive way their overall emotional development. On the other hand, if the outer world forces a child involved in music to start engaging in emotional suppression, then the psychological stages described by Erikson come into conflict with emotional development, and with consequences that may persist throughout adulthood. Therefore, musical activity—including the manner in

which a musician was instructed at a young age—has the capacity to both enhance and impede a person's entire emotional makeup.

These stages of individual development drawn from Erikson's model provide clear evidence of how criticism, absence of support, and even emotional abuse in an individual's formative stages can exert a profoundly negative impact on the personality and perception of oneself and, as an adult, of the surrounding world. For example, if practicing is constantly surrounded by drama (fatigue, illness, hunger, tears, parental disputes, etc.), then music will create a contextual learning, so to speak, within the brain that is associated with these surroundings. These negative impacts burrow deeply into our subconscious.

Reading Behavior: Self-Justifying Benefits and Neurotic Outcomes.

During our formative years we learn patterns of behavior that are in large measure responses to the environment around us. Some of these are universal, such as crying when hungry, but others are specific responses to a family dynamic. Within a dysfunctional family, for example, a child will learn coping skills that most improve his chances of survival (i.e. minimizing the abuse being inflicted). I would argue that with the exception of a small number of extraordinary children capable of analyzing a situation and coming up with conscious adaptations, most children assume behaviors that are ingested through the subconscious. They move through their painful worlds not understanding either the nature of their psychological wounds or their severe abnormality. They rarely utter, for example: "Beating me regularly is morally wrong!" Rather such a pattern becomes the "normal" reality and is often rationalized to victims by their by parents as actual "acts of love."

The link between stage fright and the subconscious imprint of a musician's training at a young age, (i.e. well before he takes the stage for the first time) needs to be stated more cogently. Stage fright is traditionally explained either by a shy disposition or not being sufficiently prepared for a concert. Nonetheless, the subconscious—the home of our fears, our desires, our

convictions—does its work. Persons experiencing very strong discomfort upon entering the stage will not overcome their fears until a fundamental change takes place in the very deepest part of their "I". Negative convictions engendered by the person himself or implanted by other people, especially parents and teachers, become more deeply rooted from year to year, making up an integral part of the individual to the point where he becomes fully "acclimated" to it.

Negative convictions often derive from the negative meanings that one assigns to situations or events. Habitual negative interpretations lead to perpetual negative expectations and affect not only our emotional but our physical condition as well. In the article "Power of Mind " by a former professor of medicine at Stanford University, Dr. Bruce Lipton, argues that

> "…if we interpret things in a positive way, we start living healthier and better quality lives, regardless of the genetic makeup we started with. A new attitude, positive or negative, sends new messages to the cells in our body and can actually reprogram their health and behavior. It can even change cellular structure, turning diseased cells into healthy cells."11

Just as one's way of thinking or an ingrained habit is formed, so concrete events influence one's way of thinking, both psychologically and physically. Emotional violence done to one who was defenseless, or tragic events in which a person was himself involved or was compelled to witness are subsequently forced down into his subconscious. Losses can take an almost infinite variety of forms: the death of relatives or friends; the loss of very significant relationships; the sudden deterioration of one's own health or of important personal skills; disappointments in people we trusted; unfulfilled ambitions and aims; and the psychological, material, and physical conditions of life.

Hence any hypertrophic reaction to something—in the case of the present study, to the entry on stage of one dedicated to his profession—has its roots in the subconscious. If one desires to continue one's professional activities it is essential to give serious consideration to one's beliefs, feelings, and thoughts at the subconscious level, and to develop strategies for

11 B. Lipton, *The Biology of Belief. Unleashing the Power of Consciousness, Matter, & Miracles* (Carlsbad, CA: Hay House, 2007), pp. 94-95.

reprogramming oneself. In the case of traumas connected to irreparable tragedies that have imprinted themselves at every levels of memory, one cannot change the event itself, yet it is still possible to change one's attitude toward it.

Making such a decision requires an honest awareness of the pluses and minuses in our present perception of a past situation. Often we hold subconsciously on to our interpretations of events simply in order to justify our actions or inactions. Not taking responsibility for the interpretation of events that produced trauma leads to assertions about particular behaviors or feelings. The problem is that we ourselves choose what fills our lives–the product of either self-justifying behaviors or self-generated positive outcomes.

Upon closer examination of past situations that have caused lasting pain, we learn that the source of the pain is most often our explanation of the situation—the meaning that we attach to the event, the interpretation arising in connection with it.

For example, an innocent question to a pianist—"You are planning to learn this piece in two months? could be translated as: "You cannot make it, it is not realistic, you are not capable or talented enough, you will not succeed, and as a result you will disgrace yourself." This can only be called an interpretation. None of the interpretation was actually explicit (or even implicit) in the question. It was simply a question with neither a positive nor a negative connotation. We can parse this further by examining the positive benefits and negative costs of interpretations.

<u>Self- Justifying "Benefits":</u>

• If I am not talented, not capable, then no one will expect much of me.

• If I am a victim, then I will not be rejected.

• If I am not genuine to others as well as to myself, then I am free to use other people without being judged. I am allowed to be inauthentic.

Psychic Costs:

• Lack of creativity, inspiration, or self-realization

• Squandered development of potential; limited opportunities in life

• Restricted physical health, lack of joy and spiritual or emotional freedom

The examples cited above suggest the importance of becoming aware of how we read the events in our lives. It is only when we come to understand that the cost is higher than the benefits that we can begin to unravel the tangle of emotional knots that hinder self-expression on stage. If people hide behind rationalizations that do not allow them to do or feel something, then the possibility for positive outcomes disappears from their lives.

If, however, we choose to elect positive outcomes in our lives, then we must return in our subconscious to painful and unpleasant situations, events, or words in order to consciously reconsider the meanings that we previously attached to them. Besides the healing effect that it can bring to traumatic memories—especially if the unpleasant emotions are related to past stage experiences—a deliberate re-training (as I argue in more detail in Chapters 4 and 5) can result in more positive evaluations of future performances.

Physiological Factors that Amplify Stage Anxiety

Since I examine stage anxiety from a mind-body integration point of view (discussed in more detail in Chapter 3), the role that our physical bodies play in relation to musical performance, as well as the degree within which the variety of physical conditions can worsen the level of anxiety, looms large.

Although most of younger performers are blithely unaware, physiological impairments can play a significant role in our performance on stage. If, in addition to stressful situations, a performer suffers from the same physical symptoms on a regular basis, then performing on the stage will only amplify these symptoms. This is especially true if the pain affects the same areas of a musician's body involved in performance: the spinal chord, hips, legs, or rib cage; shoulder

and hand muscles for conductors, singers, and instrumentalist who stand on stage; or upper body pain for those who perform in a seated position.

Adrenaline production may suppress those symptoms for short periods of time. In highly evolved performers who do not suffer from high levels of anxiety, the music itself may distract them from feeling the physical pain. However, performers with severe anxiety symptoms will entertain the strong possibility that their chronic pain will only get worse. While some performers will prove more resilient in the face of physical pain, the presence of any chronic physical pain can never be a positive contributor to peak musical performance.

Experiencing physical discomfort due to pain or weakness in the muscles will contribute substantially to elevated levels of anxiety during any performance. Hence while the conditions I list below are by themselves well known and sufficiently documented in the medical context, this is the first place where they are listed directly as amplifiers of stage anxiety in a study aimed specifically at performers. I list them alphabetically since the quantity of their occurrences vary widely:

1) Compression Neuropathy/Nerve Compression Syndrome

This illness is most often caused by pressure on one and the same nerve. It is also known under other names – "trapped nerve", or "nerve root compression." Symptoms include pain, muscle weakness, tingling, and numbness. External pressure slows down circulation in the blood vessels that supply blood to the nerve. Cut off from oxygen and glucose necessary for cellular exchange, the nerve consequently delays the capacity for "action potential" (electrical signal, cell-to-cell communication). If the pressure increases or the frequency of the pressure on the nerve is very high, demyelination (breakdown of the myelin sheaths covering nerves and

nerve fibers) occurs, leading to decreased sensitivity, slowed-down motion, and disruption of other functions that depend on the affected nerve. 12

2) Focal Dystonia

In this neurological illness, a muscle or group of muscles contract(s); the illness can affect any part of the body and any group of muscles. The presence of this illness in a musician leads to professional uselessness if the groups of muscles affected are involved in the performance process. For example, hand dystonia can be marked by the arbitrary bending and straightening out of fingers which, for a pianist, means a definitive inability to play. There exists even a specific concept: Musician's Focal Dystonia. (In sports, it is often referred to as "the yips")

When the brain tells a given muscle to contract it simultaneously silences muscles that would oppose the intended movement. In dystonia, it appears that the ability of the brain to inhibit the surrounding muscles is impaired, leading to loss of "selectivity." 13

3) Fibromyalgia

This disorder is characterized by high level of musculoskeletal pain affecting a large area, accompanied by fatigue, drowsiness, poor memory retention, and frequent mood changes. It is hypothesized that "fibromyalgia amplifies painful sensations by affecting the way your brain processes pain signals."14 Symptoms of fibromyalgia usually begin after severe psychological stress, infection, or physical trauma, but it can also grow over time without any obvious "trigger" or catalyst. Parallel symptoms can also manifest themselves, such as headaches, migraines,

12 R. Shiri, H. Miranda, M. Heliovaara, E. Viikari-Juntura, "Physical Work Load Factors and Carpal Tunnel Syndrome," *Journal of Occupational and Environmental Medicine,* Vol. 66 (2009), pp. 368-73.

13 Mark Hallet, "Neurophysiology of Dystonia: The Role of Inhibition," *Neurobiology of Disease*, Vol. 42 (2011), pp. 177–84.

14 Robert Bennett, "Myofascial Pain Syndromes and Their Evaluation, Best Practice & Research," *Clinical Rheumatology,* Vol. 21 (2007), pp. 427–45.

anxiety, depression, and even Temporomandibular Joint Disorder (TMJ). Pressure on any point of the body triggers severe pain that is then transmitted to other parts of the body. Fibromyalgia is not curable, but certain techniques and medications such as the drug pregabalin can help relieve and manage the symptoms.

4) Joint Disorder

Problems with joints frequently arise in musicians who are instrumentalists, especially pianists. In playing the piano, a musician moves his fingers not only in the obvious up-and-down movements of the joints but also in horizontal movements imperceptible to the naked eye. This movement, called "lateral movement," can lead to so-called "lateral joint instability," caused by the overuse of the joints. Symptoms of this illness include the horizontal deviation of one or more fingers and a pronounced slowness in the bending of the unstable joint.

5) Joint Hypermobility

Also known as "loose joints", joint hypermobility is a joint disorder in which unstable joints move imprecisely but at supernormal speeds. While on the surface "supernormal speeds" might seem to a pianist to be an advantage, in reality the ligaments supporting a joint become weak and inflamed; this seriously compromises accuracy and also limits the possibility of prolonged or intense practice.

6) Myofascial Pain Syndrome

This syndrome is characterized by pain and muscle spasms, as well as by the weakening of muscle tissue. Although the muscle tone feels sound, the muscles cannot withstand any load,

even a minimal one such as load-free movement or the raising of a part of the body for which they are responsible.15

7) Upper Limb Disorder in Musicians

Raoul Tubiana, describes this disorder thus:

> "There are 2 main groups: non-inflammatory and inflammatory disorders. The dominant factor is pain, which will be found to vary with the disorder.
>
> The non-inflammatory disorders are caused by repeated physical effort which exceeds the normal physiological capability of the tissues, also known as overuse syndromes [...] It was found several years ago, particularly in manual workers, keyboard operators, in athletes and in musicians. The principal manifestation is pain, which varies in location depending on the instrument, and which [is] often related to decreased strength, dexterity and sometimes even to difficulty in coordinating finger movements when tired. Inflammatory disorder includes tendonitis and tenosynovitis, distinguished from overuse syndrome, but treated differently."16

While several of these syndromes are closely related, each one of them can compromise the ability of any performer to execute on their instrument. Even when the disability is not consciously known by performers it will present as an integral part of their stage anxiety. Only if it is both known and treated can the cumulative effects be gradually diminished. Sadly, most performers remain completely unaware of the range of potential physical impairments associated with their instrument and how to avoid them through a sensible practice and performance regimen. Most do not seek medical help until their condition has become crippling, and sometimes irreversible. In too many cases, the level of stage anxiety becomes a moot point if a condition reaches a certain point of severity.

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15 J. R. Fricton, R. Kroening, D. Haley, and R. Siegert, "Myofascial Pain Syndrome of the Head and Neck: A Review of Clinical Characteristics of 164 Patients," *Oral Surgery. Oral Medicine. Oral Pathology,* Vol. 60 (1985), pp. 615–623.

16 R. Tubiana, "Upper Limb Disorder in Musicians," in *Maîtrise Orthopédique: Le Journal Orthopédique*, Vol. 69 (1997), pp. 23-27.

Psychological Factors that Amplify Stage Anxiety

In 2007 Kenny and Ackerman17 categorized stage fright as an "isolated disorder," one that impacts only one specific dimension of a person's life. Many recent self-help books cite this article as the standard definition. However, from my personal association with many musicians, and having read a great number of musicians' biographies and letters, it seems indisputably clear that persons with severe stage anxiety (i.e. stage fright) inevitably experience it along with a sizeable range of other disorders that are psycho-emotional in nature. I include all of them here because nowhere else are they brought into the larger discussion concerning stage anxiety (again in alphabetical order):

1) Attention-Deficit Disorder (ADD)

This illness is often considered a "child's" illness in cases when attention deficit is combined with hyper activity, yet it influences seriously the quality of life of many adults diagnosed with ADD "inattentive type". In first case, its characteristic symptoms are heightened physical activity, impulsiveness and weak concentration, and frequent change of objectives that result from shifts in interest. Adults frequently dismiss the possibility of their having this specific disorder, citing as inaccurate a diagnosis from which most adults indeed do not suffer. However, more common in adults is "Attention-Deficit Disorder (ADD), Inattentive Type," characterized by frequent forgetfulness, misplacing things, "confusion" regarding dates and deadlines, sluggishness, and daydreaming. This is much harder for many adults to deny.

For a musician with this diagnosis, it is hard to concentrate on the immediate task of practicing, and it is difficult to memorize, which often leads to panic. Performers feel they are not in a position to control their own destiny on stage. Such people are especially vulnerable to

17 D.T. Kenny and B. Ackermann, "Optimising Physical and Psychological Health in Performing Musicians," in S. Hallam, S. I. Cross, and M. Thaut, *Oxford Handbook of Music Psychology* (Oxford, UK: Oxford University Press, 2014), Chapter 36, pp. 390-400.

fears concerning memory lapses and their ability to overcome such a lapse at exactly the needed moment.

2) Bipolar Disorder (BPD)

This condition, formerly referred to as manic depression illness, is a chronic condition in which episodes of deep depression alternate with manic highs, the duration and alternation varying with each individual. Despite the fact that this disorder is a mood disorder, if not treated in time (with suicide a chronic risk), BPD can exert a very negative influence on various areas of a person's life: lowered levels of activity, appetite, energy, sleep, speech, and ability to perceive and evaluate situations.

If a musician with BPD goes on stage during a manic phase, he could find his stage anxiety transformed into a grandiose mood accompanied by heightened energy levels and more rapid, chaotic thought processes. Even following an unsuccessful performance the musician will remain convinced that he played flawlessly, since the manic phase of bipolar disorder results in an inaccurate assessment of what has actually taken place.

Taking the stage in a depressive stage of BPD may produce spiritless, almost robotic performances from a person whose interest in living has faded to dangerously low levels. Performers with BPD who remain undiagnosed stand virtually no chance of ever processing their subconscious fears in a positive or lasting way.

3) Generalized Anxiety Disorder (GAD)

Generalized Anxiety Disorder (GAD) is, not surprisingly, the most common type, characterized by a person's excessive concern throughout daily life about every mundane detail of life—for example, unconsciously exaggerating the significance of small events; avoiding their

consequences; interpreting the behavior, words, and opinions of other people within a framework of stress and conflict; and catastrophic events as a whole.[18]

This tendency to interpret even a minor event as catastrophic can distort a performer's objective view of his stage experience and elevate the level of worry during a performance. Unlike other conditions to which I have called attention, this condition may also manifest itself in physiological terms as well, since the results of the unconscious responses directly affect the physical body, altering its temperature, heart rate, the ability to control muscle motion, etc.

4) Social Phobia /Social Anxiety

Another psychological factor, the presence of which in a musician will influence his overall presentation on the stage, is social phobia/social anxiety that refers to discomfort in social situations because of fear of doing something embarrassing, a reluctance to associate with other people, the fear of judgment from others, etc.

In the case of musicians it includes exaggerated concerns about the whole stage setup for the soloist, the specific lighting in the concert hall, the temperature on the stage, the presence of other people (especially unfamiliar performers), etc. Social anxiety refers to discomfort in social situations because of fear of doing something.[19]

5) Chronic Depression

A chronic disorder such as depression—which afflicts one in five Americans at some point during their adult life—can completely paralyze a musician on stage. Depression causes a person to lose interest in all the things that typically bring joy and satisfaction. Accordingly,

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18 J. M. Torpy, A. E. Burke, R. M. Golub, "Generalized Anxiety Disorder," *Journal of the American Medical Association,* Vol. 305 (2011), p. 522.

19 M. A. Martin, *The Shyness & Social Anxiety Workbook: Proven, Step-by-Step Techniques for Overcoming Your Fear,* 2nd ed. (Oakland, CA: New Harbinger Publications, 2008), p. 9.

performing music, having ceased to inspire or provide joy, becomes an honerous obligation. The necessity of performing music in public while one longs for total isolation from others renders any public effort sheer agony.

6) The impostor Syndrome

This syndrome is characterized by the inability of a person to recognize and/or acknowledge his achievements. Despite obvious evidence to the contrary, such people consider themselves unworthy of recognition and success, writing it off as the result of the assistance of other smarter and more competent persons.[20]

In 2012 McElwee and Yurak described this syndrome as follows

> "The impostor syndrome tends to be studied as a reaction to certain stimuli and events. It is not perceived to be a mental disorder among people, but it has been the topic of research for many psychologists. [...] Impostor syndrome has more recently been studied as a reaction to certain situations. Under this pretense, it is a response to a situation in which the individual tends to believe that he was not intelligent and was over-evaluated by others."[21]

7) Posttraumatic Stress Disorder (PTSD)

Despite the fact that this disorder is most often associated with war veterans or victims of serious losses from natural disasters, the trauma at the source of this disorder—powerful shocks on the physical, emotional, and mental levels—produces consequences that do not weaken over time but, sadly, grow only stronger. In the case of stage anxiety, traumatic memories can be related directly to a piece of music, especially if this musical piece happened to form the background for a traumatic event. Shock from any disastrous event is normal in itself; however, too powerful a shock effects permanent changes in the workings of the brain. The

20 P. R. Clance and S. A. Imes, "The Impostor Phenomenon in High Achieving Women: Dynamics and Therapeutic Intervention," *Psychotherapy: Theory, Research, and Practice,* Vol. 15 (1978), pp. 241–247.

21 R. McElwee, Y. O'Brien, and J. Tricia, "The Phenomenology Of The Impostor Phenomenon. Individual Diferences Research," *Social Sciences,* Vol. 8 (2012), pp. 184–197.

mind constantly recycles the event as well as the chain of reactions accompanying it, including fear, helplessness, humiliation, and hopelessness.

The musical background of an event in which one felt helpless or horrified will be recorded at the subconscious level and become a part of traumatic memory. Since the visual image or the realization of the irreversibility of a situation belongs to the "informative" dimension of the memory, and the musical background belongs to the "emotional," a person might not realize for years the reasons behind their hyper-sensitive reactions to some musical compositions or the reasons why they resist learning and memorizing these works.

Traumas can be related not only to war, natural disasters, crimes of violence such as rape, or suicide attempts but also to what might be viewed as less traumatic events: nightmares, tense domestic situations, feelings of rejection or unrequited love, or receiving constant criticism. For some, events from early childhood that were at the time not deemed traumatic might nonetheless have triggered PTSD, yet this is not always an obvious diagnosis.

The existence of past events in memory can be brought to light by the appearance of a sudden, outwardly unfounded fear:

> "The signs of the poorly integrated traumatic experience can appear unexpectedly and unpredictably, representing unprocessed memories of the traumatic event. As long as thoughts, memories and feelings associated with the trauma remain shut off from the actual event, it is difficult for people living with PTSD to access their inner experiences because the normal flow of emotions remains deeply affected by the traumatic event. For decades, trauma survivors have described being under-responsive (hypo-arousal) or over-responsive (hyper-arousal) to all types of events—even if they are unrelated." 22

In many cases PTSD is time-limited. In some cases it does indeed become chronic. PTSD, if left untreated, leads to a chronic syndrome and can morph into other forms of illness–GAD, depression, OCD, ADD, etc.

22 Www.nami.org/store. K. Duckworth, M.D., A. Pandya, M.D., and B. Dow, M.D. Copyright 2011 by the National Alliance on Mental Illness (NAMI), Posttraumatic Stress Disorder Fact Sheet.

8) Obsessive-Compulsive Disorder (OCD)

In OCD, unwanted thoughts and ideas appear repeatedly in a person's consciousness, making him check and re-check something many times or ritually repeat some action. OCD is described as "a disease of doubt." Musicians, used to repetition in the process of their studies, to checking and re-checking, returning to already worked-over parts in pieces, can actually overlook the existence of this disorder, provided its symptoms have not materialized in other areas of their lives. Here the disorder would be evidenced by the constant need to re-check, the fear of injuring someone, the necessity of cleaning and disinfecting objects, of organizing things, or using a certain number of repetitions of a certain action because one believes in the sacred effects and magic of certain numbers.

At the time of performance, such a person can be preoccupied with thoughts entirely unrelated to their performance. For example: "Somebody has played this piano before me; it's dirty and I will catch something; it must first be thoroughly disinfected"; or "I didn't check thoroughly to see if I turned off the stove at home; what if something catches on fire", … etc..

None of these physiological or psychological conditions are in and of themselves a root cause of stage anxiety. A performer wading through this long litany might conclude that the odds of their escaping unmarked are practically zero. Yet whether one is healthy both in terms of body and spirit, or whether one is burdened by one or more disabilities, the only path to healing starts with addressing these issues honestly and without compromise.

As I will argues in both Chapters 4 and 5, the roots of anxiety lie in a symbiosis of body, mind, and emotions. Any attempt to treat symptoms must address the entire person. A continuous search for a quick fix leaves a performer in the situation of living from concert to concert. Dealing with the roots of a problem offers performers—however painful the process—their only hope for a permanent solution. When any of the above mentioned disorders go undiagnosed, it only makes an already challenging, even precarious, situation that much more

unmanageable. The approaches that I will advocate in Chapter 5 always need to be coordinated with the conditions—often undiagnosed or wrongly diagnosed—discussed above.

Chapter 3

Stage Anxiety and Its Discontents

The Most Popular Current Strategies for Treating Stage Anxiety

Our modern world, with its rapidly increasing demand for fast information processing and an ability to multi-task, has for the last several decades witnessed a steady acceleration in both day-to-day and long-term stress levels. The phenomenon of anxiety has produced a sizeable industry of methods and techniques designed to address this chronic issue. Although in a condensed format, I have brought a dozen of them together for the first time within a performer's context. Each of the strategies/treatments/approaches catalogued below can be potentially of significant value to performers. Several of them, such as the Alexander Technique, enjoy a sizeable current vogue.

Yet they all share in common the circumstance that not one of them inquires into the nature of the performer's childhood experiences. Each begins with the patient in the brief window prior to performance and attempts to tackle the problem from there. Nonetheless, every victim of stage anxiety ought to familiarize themselves with each of these approaches, as any one of them might turn out to be a significant source of remediation.

1) Alexander Technique

In his book, *An Introduction to the Alexander Technique*, Michael J. Gelb offers the following description:

> "The Alexander Technique eludes precise definition because it involves a new experience–the experience of gradually freeing oneself from the domination of fixed habits. The best formal definition is that offered by Dr. Frank Jones, who described the Technique as 'a means for changing stereotyped response patterns by the inhibition of certain postural sets, a method for expanding consciousness to take in inhibition as well

as excitation (i.e., "not doing" as well as "doing") and thus obtaining a better integration of the reflex and voluntary elements in a response pattern'".23.

From Alexander Technique classes that I attended during two quarters at UCLA, I learned that back pain, tightening of the neck, asthma, headaches, and depression are often the result of bad habits in bodily movements. In turn, these habits make themselves known during a performance. The corrective technique is based on exercises repeated, preferably, in silence in order to become acutely aware of what is happening in one's body. The economy of effort in this process enhances the focus on the various physical responses that occur as one consciously directs remedial action toward the relaxed parts of one's body.

2) Beta Blockers

Physicians prescribe these medication to regulate cardio-arrhythmia and hypertension. Under the influence of adrenaline and other stress hormones, beta -receptors, located in the cells of organs and tissues–part of the sympathetic nervous system–alert the brain to danger. This triggers the chain reaction generally referred to as the fight-or-flight response. Inasmuch as an artistic performance is considered stressful by the body, the chain reaction is identical. Beta-blockers end up on beta receptors, where they block or weaken the effect of stress hormones (specifically, norepinephrine and epinephrine adrenaline) on those receptors. They are widely used by those who perform before large audiences and who suffer from stage anxiety.

3) Cognitive Therapy

Cognitive Therapy, or CT, counts among the most common means of dealing with many types of anxiety. It theorizes that thoughts (the simplified translation of "cognition"), feelings, and behaviors are all intimately linked, and by restructuring our thoughts we can in the end modify both feelings and behaviors. Officially founded in the 1960s by Dr. Aaron T. Beck,

23 M. J. Gelb, *An Introduction to the Alexander Technique,* 2nd ed. (New York, NY: Henry Holt & Co., 1996), p. 2.

Cognitive Therapy attempts to identify the thought patterns that trigger specific emotions and, as a consequence, behaviors. It works best with patients who are highly motivated to change their behaviors, less well with those who are resistant to change.

4) Electro Myographic Biofeedback

This method employs electromechanical instruments to determine the level of tension within the muscles. It is utilized when symptoms such as brain trauma, tension headaches, or jaw tightness are present.

"Originated by experimental psychologist Neal Miller in the earlier 1960's, biofeedback allows subjects to identify what triggering thoughts or emotions influence their personal physical responses."24

Many victims of stress or chronic pain find biofeedback a very helpful coping technique that can lower both stress and pain levels.

5) Exposure Therapy

Also called Systematic Desensitization in psychology, Exposure Therapy is used for the treatment of diverse types of anxiety, including performance anxiety, obsessive-compulsive disorder, and phobias. In this therapy a patient focuses mentally on his biggest fear while the therapist reassures him verbally and urges him to relax. This approach is often used in conjunction with a technique of muscle relaxation combined with visualization. For example, if the object of fear is a spider or a snake, the patient is put at a safe distance and from there must observe the object of his fright. Meanwhile, his therapist guides him through a process of relaxation until the cycle of tension-relaxation weakens the emotional reaction to the seen or imagined object.

6) Guided Imagery Therapy

Essentially a form of hypnosis, the patient himself projects images in his imagination with the aim of discovering and resolving emotional conflicts that he might have. Guided Imagery Therapy resembles another therapy known as Mental Practice; however, Mental Practice challenges the imagination to augment the activity with extensive details, especially

24 J. Robbins, *A Symphony in the Brain* (New York, NY: Atlantic Monthly Press, 2000), p. 76.

those which enable the mind to pass through every stage of a difficult task and lead to its fulfillment—and to do so as though the task were being resolved in reality.

7) Hypnotherapy

James Braid, considered to have founded hypnotherapy in 1841, offered the following definition:

> "By the term 'Neuro Hypnotism', then, is to be understood 'nervous sleep', a peculiar state of the nervous system, induced by a fixed and abstracted attention of the mental and visual eye on one object, not of an exciting nature."[25]

The American Psychological Association offers a more contemporary definition of hypnosis:

> "… Hypnosis is a procedure used to encourage and evaluate responses to suggestions for changes in subjective experience, alterations in perception, sensation, emotion, thought, or behavior…"[26]

Popularized in virtually all forms of media (even sometimes invoked as a stunt at parties), hypnosis at its most potent can retrain the subconscious mind while the neurons that transmit information are asleep. It offers a direct path to the subconscious that few other therapies can claim.

8) Meditation

Meditation is a form of mental training that aims to create harmony between consciousness and the physical body, and involves the integration of the best qualities of an individual. In meditation, the task most difficult to attain is the ability to keep one's attention on one point, to be completely in the present moment, and mentally to be in a state of non-awareness of oneself.

25 J. Braid, *Neurypnology* (Manchester, NH: Ayer Co Pub., 1976; a republication of 1843 edition), p. 11.

26 W. Coe, L Buckner, M. Howard, and K. Kobayashi, "Hypnosis as role enactment: Focus on a role specific skill," *The American Journal of Clinical Hypnosis*. Vol. 15 (1972), pp. 41–45.

9) Muscle Relaxation Training

Before describing this technique, it would be well to review the Fight-or-Fight Response and the Relaxation Response. The first response falls under the purview of the sympathetic nervous system; the second deals with the parasympathetic nervous system. These two systems never operate simultaneously. Close analysis of the physical changes occurring as a result of anxiety connected with any event and causing Fight-or-Flight Response demonstrates that we cannot control the majority of the physical functions that belong to that response. For example, we cannot widen or narrow our pupils, we cannot immediately influence the change of blood pressure or slow the heartbeat. To a certain extent, we are able to control our breathing and, by concentrating strongly on it, we can gradually stabilize other functions, via invoking the parasympathetic nervous system. To a much lesser extent we can take control of our muscles and consciously adjust the level of tension in them. In fact, to deliberately tighten muscles is much easier than to deliberately relax them.

Muscle relaxation training teaches the relaxation of not only the most obvious groups of muscles (e.g., hands, feet) but also those to which we pay little or no attention (e.g., the muscles of the face, the jaw, the neck). These are muscles where chronic tension can become a real health problem, capable of increasing stage anxiety (for example) even more. From a mechanical point of view, muscle tension develops with the help of blood filling the muscles. If, however, the additional blood remains longer in the muscles, toxins develop in the muscle tissues. The advantage of engaging in sports, for instance, is that the repeated contraction and relaxation of muscles allows a fresh flow of blood to enter the muscles (during physical exertion) and leave the muscles (during relaxation), taking with it toxins accumulated in the muscle tissue.

During exertion, one's whole system experiences a crisis; and the more often the muscles get exerted without the possibility of adequate relaxation, then the higher probability there is of unwanted chemicals accumulating in the muscle tissues. This will begin to irritate the nerve endings and announce to the brain a false alert without visible reasons. In this case a disease

develops, known as myofascial pain syndrome, in which the fascia–connective tissue covering the muscles and nerve endings–becomes inflamed. Muscle Relaxation Training can prevent this disease.

10) Music Therapy

"Music Therapy is the clinical and evidence-based use of music interventions to accomplish individualized goals within a therapeutic relationship by a credentialed professional who has completed an approved music therapy program. In Music Therapy, music is used within a therapeutic relationship to address physical, emotional, cognitive, and social needs of individuals."27

11) Progressive Muscular Relaxation (PMR)

In his book, *Helping Students Overcome Depression and Anxiety*, Kenneth W. Merrell offers the following description of this technique:

> "… Jacobson relaxation technique, which was initially promoted by Edmund Jacobson in the 1930's, is considered to be an active muscle relaxation method because it involves very specific physical tensing and relaxing of the major muscle groups in a progressive manner, in which the student learns the difference between states of tension and relaxation."28

12) Rational Emotive Behavior Therapy (REBT)

This is considered a parallel development of CBT. The principles are not very different, and once can consider this a very slightly different version of CBT. The founder of this theory–itself based on several rather elementary principles–is Dr. Albert Ellis. Established in 1955, REBT has gained widespread popularity especially among people who prefer proactive methods of overcoming life's difficulties, as opposed to passive ones such as medications. The technique considers various types of difficulties, both practical and emotional.

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27 W. B. Davis, *An Introduction to Music Therapy: Theory and Practice*, 3rd ed. (Silver Spring, MD: American Music Therapy Association, 2008), p. 5.

28 K. W. Merrell, *Helping Students Overcome Depression and Anxiety: A Practical Guide*, 2nd ed. (New York, NY: Guilford Press, 2008), p. 171.

The first difficulties involve external factors that do not depend on the person; the second is a set of difficulties that is created by the person himself. The therapy itself is based on the following four principles:

a) You are responsible for your own emotions and actions.

b) Your harmful emotions and dysfunctional behaviors are the product of your irrational thinking.

c) You can learn more realistic views and, with practice, make them a part of you.

d) You'll experience a deeper acceptance of yourself and greater satisfactions in life by developing a reality-based perspective.29

A New Behavioral Paradigm: Eighteen Schemas Identified by Dr. Jeffrey Young

I have reserved one final therapy for special attention, because it is the one approach that regularly looks back into a patient's background. The therapy itself is designed to address a broad range of "characterological" issues. Known as "schema therapy," perhaps the best definition can be found in the book *Schema Therapy: A Practitioner's Guide* by Jeffrey E. Young (the therapy's putative founder), Janet S. Klosko, and Marjorie E. Weishaar:

> "Schema Therapy is an innovative, integrative therapy developed by Young and colleagues (Young, 1990, 1999) that significantly expands on traditional cognitive-behavioral treatments and concepts. The therapy blends elements from cognitive-behavioral, attachment, Gestalt, object relations, constructivist, and psychoanalytic schools into a rich, unifying conceptual and treatment model …
>
> … Young developed Schema Therapy to treat patients with chronic characterological problems who were not being adequately helped by traditional cognitive-behavioral therapy ….
>
> …. Schema Therapy helps patients and therapists to make sense of chronic, pervasive problems and to organize them in a comprehensive manner. The model traces these schemas from early childhood to the present, with particular emphasis on the patient's interpersonal relationships. Using the model, patients gain the ability to view their characterological problems as ego-dystonic and thus become more empowered to give them up. The therapist allies with patients in fighting their schemas, utilizing cognitive, affective, behavioral and interpersonal therapies. When patients repeat dysfunctional

29 M. R. Edelstein, *Three Minute Therapy: Change Your Thinking, Change Your Life* (Lakewood, CO: Glenbridge Pub., 1997), p. 14.

patterns based on their schemas, the therapist empathetically confronts them with the reasons for change." 30

In chapter 9, "Schema-Focused Therapy", Lata K. McGinn and Young portray schemas as "extremely stable and enduring themes that develop during early childhood and are elaborated upon throughout an individual's lifetime… [and are] templates for the processing of later experience."31 Schemas are presented as absolute behavioral truths that yield to change with great difficulty and intensify under the influence of external circumstances.

Young singles out three ways schemas are perceived by an individual: 1) schema maintenance: a person processes information in such a way that it only confirms the developed schema; 2) schema avoidance: a person attempts to avoid situations, thoughts, and emotions capable of provoking the recurring manifestation of a developed "schema"; and 3) schema compensation: a person tries constantly to act contrary to what is expected of his "schema" or "belief system."32

The belief system of each person includes such concepts as the perception of oneself, of one's surroundings, and of other people. The basic beliefs of a healthy person are appropriate and stable: "I am a reasonably competent person: my world has some danger, but it is a predominately safe place for me. Other people may be beneficent, neutral or malevolent toward me."

A personality disorder is generally determined first and foremost by an exaggerated negative, all-consuming, and restricting conviction that "I am incompetent: my world is out of my control, other people are untrustworthy." Such people, in a situation where any "schema"/belief system is intensified, act and react in a fashion appropriate to their

30 J. E Young, J. S. Klosko, and M. E. Weishaar, *Schema Therapy: A Practitioner's Guide* (New York, NY: Guilford Press, 2003), p. 5.
31 J. E. Young, J. S. Klosko, and M. E. Weishaar, *Schema Therapy: A Practitioner's Guide* (New York, NY: Guilford Press, 2003), p. 9.

32 J. E. Young, J. S., Klosko, and M. E Weishaar, *Schema Therapy: A Practitioner's Guide* (New York, NY: Guilford Press, 2003), p. 18.

understanding of what is happening, in full accordance with how this or that belief system was originally conceived and "adopted" on an emotional level. Thus, individuals react differently to one and the same event, depending on which schema is most sharply affected. For example, upon receiving a request to pick up a colleague at the airport, three co-workers of the same company can have different reactions:

1. Fear – schema maintenance (if the conviction is intensified): "I am not up to everyone else['s level of competence]. I am going to get lost, I'll be late, everyone will criticize and blame me."
2. Malice – schema avoidance (transfer to an outside influence): "Everyone wants to take advantage of me."
3. Positive reaction – schema compensation (conviction of personal worth): "I am trusted, I am considered a responsible person."

In the same volume Judith Beck divides into two categories the most important, and yet most unfavorable, convictions about oneself and one's vulnerability: "Those beliefs, associated with helplessness–'I'm helpless,' 'I'm powerless,' 'I'm inadequate,' I'm not good enough,' 'I'm weak,' 'I'm trapped'–and those associated with un-lovability–'I'm unlovable,' 'I'm unworthy', 'I'm not good enough [to be loved by others].'" These strategies often are expressed as rules (e.g., "I must not let others take advantage of me"), attitudes (e.g. "It would be terrible if others saw me as weak") and conditional assumptions (e.g., "If others take advantage of me, then it means that I am a thoroughly weak person.")33

Such beliefs often poison a person's entire life. If he has a connection to a performing activity, he is assured of having, at a minimum, a very strong tendency toward nervousness, provoked–in tandem with other factors–by beliefs [of negative self-worth] formed in early childhood. It is essential for one to identify the decisive moments that formed these negative,

33J. S. Beck, *Cognitive Therapy: Basics and Beyond* (New York, NY: Guilford Press, 1995), p. 165.

unnatural beliefs. A person notices that his interpretation of events carries, in most cases, a negative character, evokes emotions and reactions that impede a harmonious life and if he, of course, wishes to act on his perceptions, he can ill afford not to do so.

The process of correction will depend not only on the motivation of the person, but on the vividness of the original event that formed the belief and on the age at which it happened. The deepest beliefs are formed in earliest childhood, when the child is trying to understand the world himself and others in it. Children growing up in a healthy environment are able to absorb negative and positive events in balanced form.

Those, however, who as adults suffer from some forms of personality disorder, had, statistically, undergone either rather traumatic or very tragic childhoods. Such obvious traumas as physical or verbal abuse are, in spite of perpetrators' attempts to conceal them, brought to light more readily than other "concealed" traumas—such as overbearing parents, rude teachers, humiliation from relatives or friends—that all occur on a regular basis and become a traumatic norm even though not deemed pivotal where clinical definitions of trauma are concerned.

Since not everyone who has experienced a difficult childhood suffers from a resultant personality disorder. According to Beck, this predisposition could be modulated by the absence or presence in these individuals' lives of a mentor figure who helped them revisit and thereby heal their childhood traumas.

Children who in early childhood develop negative belief systems originating from their own experience continue, as they grow up, to perceive and assimilate information in a distorted fashion. Negative events are interpreted in an exaggeratedly global fashion, while positive ones either remain unnoticed—i.e., not perceived or assimilated at all—or else become distorted in such a way that the original belief system does not require a revision.34

For example, a child, believing that he is inadequate, will not acknowledge his successes, will not recognize the development of his skills or will ignore it, telling himself: "Anyone can do

34 J. S. Beck, *Cognitive Therapy: Basics and Beyond* (New York, NY: Guilford Press, 1995), pp. 175-190.

that," or "That turned out not to be difficult, but had it been difficult I would not have done well." Often, when children have become aware at an early age of the lack of stability in their world (parents divorcing, the death of friends or relatives, quarrels within the family, alcoholism in one or both parents) they can, as adults, develop a tendency toward the careful observation of rules, and toward a desire to control everything down to the tiniest detail. This is the result of their having developed a clear picture of life as chaos in which they (as children) were absolutely helpless. If this person is a performer, appearing on stage subconsciously can be interpreted as chaos, as one more traumatizing event over which he is powerless to exert control.

To my great surprise, I have not found amidst the ocean of literature devoted to performance stage fright a single recommendation to explore the childhood of the performer, especially about how children interpret what has happened to them and how that may contribute directly to their anxiety onstage.

Young's eighteen schemas may or may not be comprehensive, but they are powerfully illustrative of the ways in which seemingly unrelated domains (specifically, onstage and offstage) are powerfully interrelated:[35]

1. Emotional Deprivation: The belief and expectation that your primary needs will never be met. The sense that no one will nurture, care for, guide, protect, or empathize with you.
2. Abandonment: The belief and expectation that others will leave, that others are unreliable, that relationships are fragile, that loss is inevitable, and that you will ultimately wind up alone.
3. Mistrust/Abuse: The belief that others are abusive, manipulative, selfish, or looking to hurt or use you. Others are not to be trusted.
4. Defensiveness: The belief that you are flawed, damaged, or unlovable, and you will thereby be rejected.
5. Social Isolation: The pervasive sense of aloneness, coupled with a feeling of alienation.

[35] Young, Klosko, and Weishaar, op. cit., p. 16.

6. Vulnerability: The sense that the world is a dangerous place, that disaster can occur at any time, and that you will be overwhelmed by the challenges that lie ahead.
7. Dependence/Incompetence: The belief that you are unable to effectively make your own decisions, that your judgment is questionable, and that you need to rely on others to help get you through day-to-day responsibilities.
8. Enmeshment/Undeveloped Self: The sense that you don't have an identity or "individuated self" that is separate from one or more significant others.
9. Failure: The expectation that you will fail or belief that you can never perform well enough.
10. Subjugation: The belief that you must submit to the control of others, or else punishment or rejection will be forthcoming.
11. Self-Sacrifice: The belief that you should voluntarily give up of your own needs for the sake of others, usually to a point that is excessive.
12. Approval-Seeking/Recognition-Seeking: The sense that approval, attention and recognition are far more important than genuine self-expression and being true to oneself.
13. Emotional Inhibition: The belief that you must control your self-expression or others will reject or criticize you.
14. Negativity/Pessimism: The pervasive belief that the negative aspects of life outweigh the positive, along with negative expectations for the future.
15. Unrelenting Standards: The belief that you need to be the best, always striving for perfection or attempting to avoid mistakes.
16. Punitiveness: The belief that people should be harshly punished for their mistakes or shortcomings.
17. Entitlement/Grandiosity: The sense that you are special or more important than others, and that you do not have to follow the rules like other people even though it may have a

negative effect on others. This can also manifest itself in an exaggerated focus on superiority for the purpose of having power or control.

18. Insufficient Self-Control/Self-Discipline: The sense that you cannot accomplish your goals, especially if the process contains boring, repetitive, or frustrating aspects. Also, that you cannot resist acting upon impulses that lead to detrimental results.

All eighteen of these schemas have one thing in common: there is no part of human life, including the experience of being onstage in a public performance, that is immune from their deleterious and corrosive effects. While there are certainly many strains of stage anxiety that can be addressed successfully by the modalities enumerated at the beginning of this chapter, there is surely a sizeable population of those affected for whom the issues is much more broad-based and rooted in behavioral response patterns established in childhood.36

Types and Stages of Stage Anxiety: A New Synthesis

In order to delve more deeply in Chapter 4 into the science-based origins of stage anxiety, and in Chapter 5 to apply some of these findings to real-world situations, we need first to understand both the types and stages that bind the various strands of this destructive experience together. Although I have drawn on several previous models, I have filled them out to create a fresh synthesis of stage anxiety as it applies to musical performers.

TYPES:

Type A Anxiety: An upsurge of eager anticipation, pleasant excitement accompanied by light euphoria, by an impatient awaiting for one's entrance onto the stage, by an almost

36 As part of this study the author undertook a questionnaire-based survey on Stage Anxiety that was circulated amongst UCLA faculty and students during the academic year 2012-2013. Although the presentation of this data would easily merit a full-length study of its own, from the more than 100 responses the number of respondents who characterized their stage anxiety as chronic was almost two-thirds. It may be that the study sample was self-selecting—that is, those who responded tended to be just those with the most serious symptoms. But even taking this into account, the figure is much higher than any current evaluation of stage anxiety would suggest.

overwhelming desire to share the music, a clear and joyful image of one's entry onto the stage, a well-organized plan of performance. This is the optimal and most desirable pre-concert state. Unfortunately, there are also others …

Type B Anxiety – A sense of near panic; agitated nervousness manifested by absence of concentration, abrupt shifts in thoughts and attention, restlessness and anxieties moving into a state of fear. In such a pre-concert state, the performance often becomes unmanageable and leads to dismaying occurrences such as wrong notes in passages that had always come out well in the past, omitted notes, memory lapses, failure to articulate climaxes, and an inability to achieve contrasts that require absolutely relaxed hand muscles and high sensitivity of the fingers.

Type C Anxiety – General apathy, a despondent and depressed state in which the aim and content of the performance moves to the periphery of consciousness and the only persistent thought is "may all this end soon."

In music, anxiety does not only have a negative effect on performance, on the contrary, optimal amount of it is necessary for emotionally charged concert. The process of learning to cope with its severe symptoms should aim to move the performer from type "C" to type "A"

There is, to be sure, some overlap amongst these three categories, but even if viewed as points along a continuum they nonetheless encompass the full range of stage-anxiety types. Performers desirous of addressing longstanding or chronic problems with stage anxiety would do well to place themselves along this continuum; the success of any treatment program will depend in no small measure on the truthfulness with which this is achieved.

STAGES:

Despite the fact that the psychological state of each musician is very individual, we can nonetheless delineate clear phases within a full cycle of stage anxiety:

Stage 1: The Pre-Performance State. This phase does not operate within a distinct time frame but begins to emerge as soon as the musician learns the date of his performance.

Depending on the degree of preparedness or one's own calculations of the time necessary for preparation, the anxiety at this stage will range from moderate to strong.

Commensurate with the approach of the scheduled date, the level of anxiety will vary again based on the level of preparedness and on the length of time remaining before the appearance on stage. If the major parts of the technical and musical challenges have been mastered, the works memorized, and the remaining time devoted to trial runs of the program in front of friends or a minimally demanding audience, then the anxiety will be rather like inspiration and will nurture the desire to perform on the scheduled date.

If, on the other hand, the repertoire has not progressed sufficiently and difficulties arise in the memorization of the material or overcoming technical and musical difficulties, then it becomes clearer that there is only enough time for an insufficient preparation. The first performance will take place on schedule and in front of a demanding audience; the anxiety level increases proportionately and can begin to disrupt the musician's normal regimen—sleep, appetite, general emotional state.

The less time that remains before the performance and the lesser degree to which the musician is satisfied with his level of preparation the more the level of his anxiety will grow, often with additional symptoms: irritability, frequent mood changes, inappropriate behavior or reactions, or increased sensitivity and touchiness.

The day before the performance, all the symptoms enumerated above can become painfully acute and, on the day of the performance, they may accompany the performer to his long-anticipated stage entry.

Stage 2: Immediately Prior to the Event. At this point various physical and psychological symptoms emerge—for example, changes in blood pressure, increased or decreased body temperature. Some performers experience physical indisposition or pain, causing them to want to cancel the performance due to illness. If the musician does not deal with the causes of these

physical symptoms—connected, as a general rule, with stage anxiety—then these symptoms will continue to accompany his subsequent emotional and psychological states while on stage.

Overcoming these physical symptoms and "attacking" one's fears requires enormous willpower and brings, in these rare instances, almost overwhelming relief. Even if the performance, as a result, is not the most successful, the mere fact of overcoming one's faintheartedness influences in a very positive way the personal and professional self-appraisal of the performer.

Stage 3: The Performer's Entry on Stage. This phase, when the anxiety-ridden performer is entirely alone with himself, rarely remains in memory. In his memoirs the outstanding French conductor Charles Münch wrote:

> "To be honest, I cannot say that I actually was directing the orchestra, for I was wholly engrossed by the thought of how to master the fear that was paralyzing me. I was moving on the stage, feeling that I was literally forcing my way through a dense shroud of fog. My legs did not feel the weight of my body. The law of gravity did not seem to exist for me. I was swimming in an unreal, dreamlike world, which was not at all rose-colored, and I conducted like an automaton. The sympathetic audience mistook my panic for inspiration."

A sizeable number of musical performers could describe their own entries onto the stage in very similar words.

Stage 4: The Performance Begins. In a successful performance this is the point where laser-like concentration on the task at hand is essential. The performer must remind himself of fundamental tasks: the overall plan, the general tempo, the degree of push-and-pull, the range of the dynamics. This is the moment when one needs to disconnect from the outer world and become absorbed in an inner world—a world of intense human expression, emotions, and narrative strivings. All of these depend on intense concentration and calm awareness, allowing one not only to control the muscles of the body but to listen to oneself as if standing outside the body.

For many performers the beginning of a performance is one of the most difficult phases. Many of them hardly hear their first few measures, since on the psychological level there are too many distracting factors: the audience's presence, the lighting in a particular venue, the unfamiliar acoustics and temperature in the concert hall, the sensing of the audience's attention level.

Then there are the distractions on the physical level: the quickened heartbeat that alters fundamentally the sensation of time, the near impossibility of coordinating one's breathing, movements, heartbeat, and thought processes. Add to this the trembling of hands that compromises both sound and phrasing. For some performers the nervousness evaporates at this stage and only the music remains—a rich narrative landscape lying before them, delivered with great deliberateness and intent, the culmination of all the studies that preceded this much-desired moment.

Stage 5: The Heart of the Performance. The extent of nervousness here will depend on all the preceding stages. We can state with some confidence that if the stages leading up to here are rocky, it will prove all but impossible to rescue the performance from impending disaster. For example, if the anxiety level before the entry on stage was already very pronounced, and the beginning of the performance did not satisfy the performer (the tempo was too fast, a note failed to sound, the dynamic nuances were not there), then the course of the rest of the performance develops typically in this direction:

Unhappy with the way everything has been going since the beginning, the performer falls into a progressive state of panic, heeding the flow of negative and uncontrolled thoughts that support the original thought: "From the beginning, nothing has gone the way I wanted. Everything is spoiled; now it will become only worse." What happens on the mental level affects almost immediately the emotional level and, as a result, the physical execution goes successively "off track" in rushed passages, spurts of wrong notes, poor tone color, etc.

Every anxious performer, of course, hopes for the following: He makes a conscious decision to express as much as he is able to in the immediate present. He will understand that he is responsible for the flood of thoughts occurring in his consciousness. At the surfacing of negative thoughts, he will consciously choose for himself a certain "mantra" that will help switch his attention into a more productive direction and preserve his emotional balance.

As a result, the genetically predisposed reaction to threat or danger, referred to in psychology as the "fight-or-flight" response, accompanied by rapid, profuse injection of adrenaline into the bloodstream, prepares the whole body for physical flight from danger. Yet he makes the conscious choice to fight rather than to flee. The performer will make the decision to arrest his slide into a torrent of negative thoughts and will regain that crucial foothold of stability within his consciousness.

In all these phases the process of nervousness goes through the same sequence of chain reactions: thought-emotion-physical state-behavior. All cognitive psychology is built on that principle; it works as reliably as the law of gravity, regardless of our faith, or lack of same, in it.37

Most cognitive-behavioral models put these elements in a bidirectional cycle, such that behaviors can, and very often do, influence thoughts, and vice-versa, and both can influence or be influenced by emotions and physical feelings.

The development of events in the second scenario is possible only as the result of a performer's thorough mental preparation for the performance long before appearing on stage. I refer here to performers with highly stable psyches—those without serious emotional "scars", who have not undergone serious psychological traumas (linked or not linked to their professional activities), and who do not suffer from any form of emotional or psychic disorder, impairment, etc.

37 This is not to deny the strategy employed by some cognitive psychologists of sometimes working backwards from the behavior to the thought, in the hopes of altering the original trigger. This is just playing with the law of gravity, not altering it.

Mental preparation for a performance is not often a conversation that teachers hold with their students. From childhood most young performers develop the mindset: “If you are ready—i.e., the text is learned, technically all is well polished, and expression and phrasing are firmly in place—then all will be well.” As his repertoire becomes more and more complicated, the pupil works more and more diligently at his instrument. Yet he may remain nervous because even as he polishes, some passages remain unpredictable in execution right up to the very moment that the performer comes out on stage.

In the event of an unsuccessful performance or a “total loss,” the musician tells himself: “I just didn’t work on it enough,” and doubles the amount of time he spends preparing for his next concert. Very few teachers can analyze psychological, mental, and emotional states during a performance. Discussions of what succeeded and what did not hinge purely around the musical work itself. For example: “Here you didn’t achieve a climax; here you played the wrong chord; here you didn’t hold the fermata; here you rushed through the passage.”

What if, after such a rational analysis, the teacher asked the question: “Can you remember your thoughts before this rushed passage? What were you feeling while playing it?” In this case the student would surely develop a deeper understanding of his performance. A solid link between thoughts and emotions would have been forged. Subsequent work on such “unpredictable” places in a musical piece would now be informed by his thoughts and emotional state as they arise while working on these portions.

Sadly, in the majority of instances the repeating of a difficult passage countless times, the attempt to adapt oneself physically yet proving unable to find the needed position of the hand or the proper touch, the musician does not realize how often the thought intrudes: “It’s not working again”. With each repetition, unless musician chooses to temporary re-direct his attention, that thought repeats itself, and the remembering of the passage gradually burns itself into the muscular, auditory, and visual memory. But the neglected emotional memory also remains.

Unaware of the power of the emotional memory and of the pivotal role it plays, the performer is often extremely surprised and dismayed when it is precisely that passage on which the most time, energy, and emotion were expended that did not succeed on stage. If only the performer knew that the reason could be that the expended emotions and energy at the very beginning of mastering the given material carried a negative character. And if the performer only knew that on the basis of repetitive subconscious thought this material was labeled "doesn't work out," he would change the approach to his studies, paying attention not only to the physical execution but also to the thoughts and emotions that arise in the process of practice.

Unfortunately, beginning students do not have information to answer the question: "Why didn't what succeeded in class succeed on stage?" They invariably receive the standard reply: "That means that something was not thoroughly learned" and, consequently, the conclusion: "To fix the problem I need to practice more."

During the years of learning to play an instrument, such an approach becomes habit. With increasing levels of difficulty and expanding repertoire, psychological pressures increase (with more and more "unpredictable parts"), nervousness intensifies, and the experience of performances with "losses" accumulates. The attitude toward going on stage shifts gradually from a joyful, positive desire to share one's feelings about beautiful music to a certain feeling of duty, of an obligation to do everything right and finally, a feeling of playing "with no guarantees."

Stage 6: The Performance Ends. As a performance nears its conclusion, the anxious performer is consumed by feelings of regret, of remorse, of loss. "It's too late to do anything now," "I knew it would turn out this way." They may have as few memories of their post-performance bows and the exit from the stage as they had about their entrance onto the stage. The performance itself has come full circle.

Stage 7: The Post-Concert State. At this stage the musician once again goes through a series of emotions—either positive or negative, depending on the degree of satisfaction or

dissatisfaction with the performance. This stage leaves a powerful imprint on the artist. Objective self-evaluation can lead to personal and professional growth, the ability to reflect equally on both positive and negative moments within the performance, and to examine dispassionately its entire span. Sliding into black-white dichotomies—"Everything went badly" or, equally, "Everything went well"—predicts a future repetition of the same performance issues that haunted the just-completed performance.

Every performer—even the most relaxed and well-adjusted—must navigate these seven stages. At virtually any point during the process the experience can turn nightmarish. The worst outcome of this scenario—much worse than the flawed event itself—is that most performers remain entirely ignorant of the underlying causes. Being aware of these causes could prevent the performer from experiencing repetitive negative outcome.

Chapter 4

What the Science Tells Us

Introduction

Since we are considering stage anxiety, we should begin this chapter by acknowledging that many musicians can be routinely characterized as hypersensitive individuals. Because of the high-pressure nature of the music profession, anxiety disorders that may be present together with stage anxiety, are often not even diagnosed or treated for years, if at all, because many consider their anxiety to be "normal" reactions to this type of pressure and stress.

Research into the general causes of anxiety is scarcely lacking. Some studies insist that anxiety should not be linked to a single situation or event and believe that in cases of anxiety disorders, both physical and environmental triggers must be present. Yet in this kind of research the accumulated experiences that are stored in our body and are therefore unrelated to a particular, current, or stressful event are not even considered.

Body and mind experiences are routinely divided into sub-disciplines such as psychology, bioenergetics, neurology, cell biology, genetics, etc. The more comprehensive notion of mind, body, and emotional unity—of physiological and psychological integration—is often forgotten when a seemingly quick pharmaceutical solution is available. Regardless of the benefits that drugs can bring under proper psychiatric supervision, a deeper self-examination can often lead to more definitive resolutions.

The positive effects of certain medications in treating stage anxiety are well known; however, suppressing anxiety through chemical means differs from releasing one's full emotional potential—not to mention the risk with drugs of psychological dependency in some individuals. As the frontiers of medical science continue to advance, the mind/body/emotion dichotomy remains largely immune to serious scrutiny. Yet science has given us many pieces of this mosaic, which is the primary subject of this chapter.

In our contemporary world of ever higher achievement, high energy levels, relentless time management, and perpetual efforts to achieve in all areas of daily life, people—not surprisingly—experience a general state of worry or fear related to their financial security, their future, their quality of life, the well-being of their children, etc. These feelings we consider normal in our society. The growing professional standards and fierce competition for well-paying, engaging jobs can readily engender fear in the face of interviews, tests, exams, or recitals—all of which may have a decisive impact on one's future.

This kind of worry is not considered problematic until it starts interfering with daily functions—for example the inability to sleep and eat—or until it begins to affect one's career, family, and social life. Once the general concerns and reactions to normal (including stressful) life situations grow out of proportion to what is usually expected, the innocent worry that used to serve as a motivator transforms into the medical diagnosis known as clinical anxiety.

Theories of Anxiety Causation

In Chapter 3 I outlined three "types" of stage anxiety as they manifest themselves in practical, everyday life. Scientists, on the other hand, look for causality. They tend to divide anxiety disorders along categories based on scientific disciplines and even subdisciplines. Identifying underlying causes is a popular subject that interests—among others—neurologists, microbiologists, chemists, behavioral scientists, psychologists, and psychotherapists. The research in this broad field has understandably engendered a variety of theories that help set the stage for a more symbiotic approach.

1) Fearful Experiences from the Past

Some psychoanalysts see the roots of anxiety in unconscious conflicts that derive from past fearful experiences. If the conflict is not resolved (frequently the case for people experiencing anxiety), these experiences can prime the person to not only react adversely to situations in

which most people would react calmly, but also to experience on a daily basis physical pain, fatigue, and limitations of movement.

Allen, Cleary, and Sowers summarize how personal life experiences shape our personality and our overall perception of life:

> "…It has long been recognized that our individual memories shape our sense of who we are as well as what we do and how we do it, on a moment to moment basis. Our personal identity, our comprehension of the world around us, our place in that world, what we can and cannot accomplish, our every act and decision-all are referenced to what we have learned and remembered. If these references are to traumatic past experiences, and to the resulting pains, fears, angers, judgments, secrets, mistruths, guilt, narrow attitudes or beliefs, our physical and behavioral flexibility are limited. Freedom of movement and thought, and awareness of what is happening inside and outside of us are compromised…"38

2) Brain Chemistry: Neurotransmitters and Chemical Imbalances

The majority of psychiatrists see a correlation between anxiety disorders and biochemical imbalances in the brain. In these cases, psychiatrists prescribe medications that help to alleviate the adverse effects of certain brain chemicals. The most accepted theory of why people develop anxiety posits that chemical processes in the brain change the level of neurotransmitter activity (more details below), leading to anxiety and/or depression.

"Neurotransmitters" are actually a family of chemicals that contribute significantly to our emotional condition. Balances in neurotransmitters, and their dynamics, are complicated and many aspects remain unknown. Their level can be either normal, high, or low. A description of the most typical neurotransmitters and the roles they play in regulating our physical and emotional feelings provides a better understanding of the chemical processes in the brain:

> *Dopamine*: The human brain includes several dopamine systems. The best known role of dopamine is its neuronal contribution to reward-motivated behavior. Other dopamine systems are responsible for motor control and the release of hormones. Elevated levels of this neurotransmitter in the brain cause excitement; in severe cases paranoia, hallucinations, and disordered thoughts—even schizophrenia—may occur. Lower than

38 M. J. Allen. *Charge and Field Effects in Biosystems*. 3d ed. (Boston, MA: Birkhauser Verlag AG, 1992), p. 2

normal levels of dopamine trigger motor or movement disorders such as Parkinson's Disease.39

Endorphins: Like serotonin, the body produces this substance in order to kill pain or provide a feeling of well-being. High levels of endorphins are associated with many forms of pleasure and is responsible for intense responses such as ecstasy or euphoria. In the world of sport, marathon runners refer to these substances as the "runner's high." It is also produced during pregnancy, and its sudden increase closer to delivery time creates the need in some women to rearrange furniture, clean house, go shopping or other activities that require high levels of energy.40

Norepinephrine/noradrenalin: Mostly known as a hormone necessary for concentration, it is also involved in the fight or flight reaction. High levels of this brain neurotransmitter produces strong physical manifestations of anxiety, such as trembling, restlessness, a smothering sensation, dry mouth, dizziness, flushes, and problems with concentration. A "panic attack" generally results from a sudden surge of norepinephrine in the brain.41

Serotonin: Popularly understood as related to our sense of well-being and security, the levels of these chemicals or neurotransmitters in the brain contributes directly to our overall mood. Indeed, "When serotonin is low in the brain system, depression and other mental health problems are produced. This can happen in some forms of depression. Low serotonin is also sometimes associated with bulimia, a severe eating disorder, but in bulimia the urge to binge eat is complex and may be different in different people, but could involve the "reward" from eating (like a drug), trying to numb one's emotions from the binge, or as a result of overwhelming hunger secondary to self-restriction of calories where the body craves sweets and carbohydrates in what could possibly be effort to raise serotonin levels."42

The debate over theories of brain chemistry centers on the issue of whether patients will eventually improve even without medication—that is, whether the body can itself make the necessary adjustments to excessive or insufficient chemical levels.

3. Habitual Behaviors vs. Genetics

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39 W. Schultz, "Multiple Dopamine Functions at Different Time Courses," *Annual Review of Neuroscience:* Vol. 30 (2007), pp. 259–288.

40 A. Goldstein and P. Lowery, "Effect of the opiate antagonist naloxone on body temperature in rats," *Life Science*. Vol. 17, Issue 6 (1975), pp. 927-31.

41 M. Tanaka, M. Yoshida, H. Emoto, and H. Ishii, "Noradrenaline Systems in the Hypothalamus, Amygdala and Locus Coeruleus Are Involved in the Provocation of Anxiety," *European Journal of Pharmacology*, Vol. 405 (2000), pp. 397–406.

42 S. N. Young. "How to Increase Serotonin in the Human Brain without Drugs," *Psychiatry and Neuroscience*. Vol. 32, (2007), pp. 394-99.

Some theorists suggest that anxiety is a habitual behavior learned during one's formative years and can be unlearned with the help of therapy and changes in lifestyle. Today, scientists are also trying to determine if there is a particular gene (or set of genes) with which we are born and that predispose us to anxiety disorders.

Since we are all born with easily observable physical similarities between ourselves and our relatives, it is reasonable to presume that we could also inherit psychological predispositions. Scientific evidence already suggests that anxiety runs in families. Parents who suffer from anxiety are more likely to produce offspring who suffer from the same syndrome. However, many psychiatrists believe that genetics alone is not enough to insure that any individual will develop anxiety; There is empirical evidence of this, since twin studies suggest that the variance explaining most anxiety disorders is accounted for by some combination (slightly different depending on disorder) of genetics, shared environmental experiences, and unique environmental experiences.

Some therapists practice based on the belief that past experiences in life are the main cause of anxiety disorders. If a child grows up in a stressful environment, being exposed, for example, to long-term abuse, violence, poverty, or stress, he will be at high risk to develop anxiety.

4. Theories of Personality

Many researchers believe that personality also plays a crucial role in determining how well a person deals with stress-related situations in life. A person with low self-esteem or poor coping skills has a tendency to develop anxiety more easily than a person with higher self-esteem and excellent coping skills; low self-esteem and poor coping skills also lead in a downward spiral to an ever poorer ability to cope with stress. Since the first personality type tends to see situations as threatening, this misperception self-engenders a higher level of stress. Consistent stress, as a rule, results in the development of anxiety.

All of these theories–of fearful experiences, of brain chemistry, of genetics, and of personality—deal with the causes of anxiety from a single perspective. Since modern scientific research is by its very nature complex, researchers generally remain within their familiar channels.

Yet if we survey the considerable progress that has been made over the last three decades, we now have enough science-based evidence to begin piecing together the complex chain of actions and reactions that lead ultimately to more severe forms of stage anxiety. They all suggest that, rather than examining a particular moment when a performing artist takes the stage, we need to look at the whole fabric of a person's life starting from early childhood.

Where Are Emotions Stored?

All of the above-mentioned theories of anxiety causation correlate with emotions. Emotions that we experienced in the past provide a basis for one theory; emotions that we experience in a particular moment that are responsible for changes in brain chemistry provide the basis for another theory; theories of habitual personality, habitual behaviors, and genetic predispositions provide yet others. All of these are related to emotions and the ways in which people process them. This leads inevitably to a pivotal question: Where, amidst the extraordinary complexities of our bodies/minds, are emotions stored?

In talking about emotions, we usually mean changes in our mood that only temporarily affect our cognitive and physical condition. These changes are triggered by certain events or situations and can be expected to expire once the event is past. However, the most recent research shows that overpowering emotions related to traumatic memories remain not only on our subconscious level but on the physical level as well, and for long periods of time.

This research suggests that emotional traumas are stored in connective tissue known as *fascia*—the largest system in the human body, connecting all bodily systems and described as

"…*dense regular* connective tissue, containing closely packed bundles of collagen fibers oriented in a wavy pattern parallel to the direction of pull."43

In order to understand the process of emotion-storing mechanisms and the negative effect of stress-related substances released during emotionally charged situations, it is very important to get familiar with the structure of *fascia*. The flexible structure of this connective tissue consists mostly of collagen fibers. It allows the fascia to resist high-tension forces.44

During and after emotionally charged or traumatic experiences, the human system releases chemicals (adrenalin, cortisol, etc.) that alter the collagen structure of connective tissue. Overstimulation of this tissue can lead to overproduction of these chemicals. The cells store these substances for varying periods of time depending on the intensity and duration of the experience. It is well known, for example, that most chemicals entering our systems in the form of prescribed medications do not leave it immediately; indeed, some remain for extended periods of time.

Most medications circulate in the bloodstream leaving the system within two days to several months, depending on the drug in question. If the cell receives excessive amounts of chemicals before it recovers from the previous dose, the accumulation within the cell can exceed its capacity. The continuous intake of some medications can lead to a fatal overdose; indeed, this serves as the leading cause of celebrity deaths.

Such a tragic example illustrates how "coping" substances produced during stressful experiences are able to influence the chain of chemical reactions and responses within our bodies. From the stage anxiety point of view, performers who experience severe symptoms (especially if, as is often the case, they increase over time) were more than likely exposed to situations that trigger the release of these chemicals. Any chemicals added to already

43 E. Nicpon Marieb and K. Hoehn. *Human Anatomy & Physiology* (New York, NY: Pearson, 2005), p. 133.

44 Marieb and Hoehn. *op. cit*, p. 133.

accumulated amounts (such as adrenalin during a performance) can lead to severe and debilitating physical and emotional symptoms.

How long do those chemicals remain in our bodies and where exactly do we store them? For a long time, neuroscientists have agreed that emotions are "controlled by and stored in certain parts of the brain."45

However, in the 1970s, after neuroscientists Johanna Hill, Bir Zipser, and Candace Pert analyzed the brain patterns of twenty-two various neuropeptide receptors (small molecules used by neurons to interact with each other, transmitting signals to the brain and changing intensity depending on the stress level of the situation), they came to the conclusion that these molecules can be considered a biochemical agent of emotions. The most recent research suggests that emotions can be stored on a level deeper than even the brain and the nervous system.

In order to better understand how this mechanism works it is necessary to describe briefly how cells are built and function. Cells are the primary building blocks of live organisms. In humans, cells are responsible for extracting nutrients from food, transforming those nutrients into energy, exchanging information between each other, and tying the entire system together. Everything in the human body consists of cells. Any chemical interaction within the body depends on healthy, energetic, and efficient communication between cells.

Cells themselves consist of a variety of parts, each with a specific function assigned to them. The major component of the cell mentioned in many scientific books and articles is the *cytoskeleton*. The cytoskeleton consists of long fibers connected to each other. They are crucial to cell division, the determination of a cell's shape, and its ability to move and track the movement of other substances within the cell.46

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45 J. William, " What Is an Emotion?" *Mind*. Vol. 9, Issue 34 (1984), pp. 188-205.

46 S. R. Hameroff. "Coherence in the Cytoskeleton: Implications for Biological Information Processing," in H. Frohlich, ed., *Biological Coherence and Response to External Stimuli* (Berlin, Germany, Springer-Verlag, 1988) pp. 242- 263.

James L. Oschman explains this basic level in detailed scientific terms:

> "…For a number of years we have been exploring the molecular anatomy of the body from a new perspective. Papers published in 1981 and 1984 showed that the connective tissue, the basic construction fabric of the organism, is continuous with the cytoskeletons of cells throughout the body. The cytoskeleton is the molecular scaffolding that gives each cell its characteristic shape and ability to move about. The cytoskeleton is frequently referred to as "the nervous system of the cell." Our new view arose from an important discovery made by a number of cell biologists. The fibers and filaments that form the cytoskeleton do not end at the cell surface. Instead, they extend across the cell membrane, and connect to the extracellular fabric, classically referred to as connective tissue. Linking the two systems together are molecules called glycoproteins, anchor proteins, integrins, and cadherins, as well as calcium ions and sugar-rich proteins called proteoglycans. Inside each cell, elements of the cytoskeleton attach to the nuclear envelope, and therefore connect to another matrix, called chromatin, that fills the nucleus and envelops the DNA. Even the mitochondria, the tiny "powerhouses" within cells, contain matrices."47

Further scientific evidence supporting this model is supplied by Candace Pert, who explains how chemicals, released during emotionally charged experiences, can change the actual structure of the cell:

> "… Binding to specific receptors on the surface of the cell, these chemicals are capable of triggering a chain of biochemical reactions deep within, changing the aspect of the cell to either positive or negative effect."
>
> "…receptors are not stagnant, and can change in both sensitivity and in the arrangement they have with other proteins in the cell membrane. This means that even when we are "stuck" emotionally, fixated on a version of reality that does not serve us well, there is always a biochemical potential for change and growth. Most of our body/mind attention shifts are subconscious. While neuropeptides are actually directing our attention by their activities, we are not consciously involved in deciding what gets processed, remembered and learned. But we do have the possibility of bringing some of these decisions into consciousness, particularly with the help of various types of intentional training that have been developed with precisely this goal in mind—to increase our consciousness. Through visualization, for example, we can increase the blood flow into a body part and thereby increase the availability of oxygen and nutrients to carry away toxins and nourish the cells." 48

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47 J. L. Oschman and N.H. Oschman, "Somatic Recall, Part 1: Soft Tissue Memory," in *Massage Therapy Journal*, Vol. 34, (1995), pp. 4-9

48 Pert, C. B. 1st ed. *Molecules of Emotion: Why You Feel The Way You Feel.* (New York, NY: Charles Scribner's Sons, 1997), p. 8.

This argument leads unavoidably to the conclusion that cells within the body are capable of retaining information and energy about a traumatic event. Elsewhere, Pert posits that:

> "… Repressed traumas caused by overwhelming emotion can be stored in a body part, thereafter affecting our ability to feel that part or even move it. I believe that unexpressed emotion is in the process of travelling up … When emotion moves up, it can be expressed. It takes a certain amount of energy from our bodies to keep the emotion unexpressed … I think unexpressed emotions are literally lodged lower in the body."[49]

Whether or not Pert's "travelling up" model is viable, psychologists and neuroscientists alike believe that both extracellular and cellular matrices are connected throughout the body[50] and that emotions are stored on the cellular level. This has led to the theory known as "Fascia-based Emotional Memory Storage (FEMS) System Theory." Developed by psychologist Chris Pringer, the theory holds that chemicals released after emotional trauma can create emotional scars whose traces are literally recorded within the fascia:

> "…Collagen deposited along lines of tension in connective tissue may create a "tensional memory" in the physical fascial structure. Certain chemical substances that are released, particularly after emotional trauma, may alter the collagen structure into a specific shape known as an "emotional scar." The sensory nerves, proprio receptors, and other nervous system components, "sensors," are used in conjunction with the Motor Cortex of the brain to create a "memory" of emotion related events (ERE) as registered in the body fascia. The fascia is richly supplied with sensors such that "Sensor Field Arrays" are created by multiple layers of fascia and in varying numbers of planes in any given area of soft tissue. That is to say, an energy field is created by any given grouping of sensors (a Sensor Field Array), simply due to the electro-magnetic vibration created by each of its components, that when gathered together form a collective electro-magnetic field."[51]

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49 Pert, C. B.(1997). 1st ed. Molecules of Emotion: Why You Feel The Way You Feel. (New York, NY), Charles Scribner's Sons, 138-140

50 See especially J.L. Oschman, *The Connective Tissue and Myofascial Systems* (Dover, NH: N.O.R.A. Press, 1981), p. 2.

51 R. Schleip, "Fascial plasticity: a new neurobiological explanation," *Journal of Bodywork and Movement Therapies*, Vol. 7, Issue 1 (2003), pp. 11-19 and Vol. 7, Issue 2 (2003), pp. 104-116.
See also Christopher Pringer, "Fascia Memory Theory' or 'Fascia-Based Emotional Memory Storage (FEMS) System Theory': A Theory of Multi-System Bio-Energetic Communications About Reading Sensor" (transcript of conference presentation (n.d.). Link at http://www.chalicebridge.com/FasciaMemTheory.html.

This theory provides the underpinning for various alternative medicine approaches such as acupuncture and Rolfing, and it has made gradual inroads into traditional medicine as well (for example, trigger point injections for myofascial pain disorder). The idea offers to both psychology and physiology a new basis for understanding the impacts that our emotional attitude, stress levels, unbalanced physical movements, and injuries have on our body and quality of life. For performers, this knowledge affords a much deeper look at the entire personality in which life experiences are actually "recorded" on the physical level. It offers more comprehensive tools than we ever had to address the mysteries of severe anxiety.

Memories and Anxiety

From early childhood and throughout our entire lives our sense of identity, our comprehension of our place in this world, our ability or inability to accomplish something meaningful in life, the decisions we make on a daily basis—all of this relates directly to memory and skills we have gained through a variety of life experiences. Past experiences contribute to our belief systems. Our perception of the outer world can contribute to a sense of self-worth and competence, while negative past experiences can seriously compromise our perception of the world and our place in it, leading not just to general anxiety disorders but to increased anxiety symptoms during stage performances.

We all intuitively understand the pivotal role that memory plays in our lives: it allows us to remember the names of our friends, important dates in our lives or the lives of our significant others, to recognize people who we met years ago, to remember stories or events from childhood, or to recall our parents' voices. For a musician, and especially for pianists with their vast repertoire routinely expected to be performed by heart, memory is one of the key ingredients in a successful career.

A major contributor to stage anxiety is the fear of forgetting what was learned during the preparation phase. The most valuable aspect of memory for musicians is the ability to learn—as

quickly as possible—and to reproduce with maximum precision the information written in the musical score. A major concern for musicians is the ability to remember a musical work under the pressure of live performance. The most ubiquitous pre-recital musician's nightmare is about the mind going "blank" on stage.

This fear frequently originates in the performer's past when, due to a variety of reasons, memory slips took place or were narrowly avoided. The majority of performers (except those with photographic memories) experience at least once in their career enough stage anxiety to affect the level of their attention.

This phenomenon has been noted not only by musicians but by neuroscientists as well. In "Dissociable Prefrontal Brain Systems for Attention and Emotion, H. Yamasaki, K. S. LaBar, and G. McCarthy describe this experience from a scientific point of view:

> "… Research suggests that emotional stimuli and "attentional functions" move in parallel streams through the brain before being integrated in a specific part of the brain's prefrontal cortex (the anterior cingulate). This is why emotional stimuli are more likely than simple distractions to interfere with your concentration on a task such as driving or performing publicly."52

Hence anxiety interferes with concentration and affects memory at the very moment of performance. However, this is not the only time when anxiety interferes with memory. During preparation, many performers experience at least once in their lives an unusual difficulty memorizing their repertoire. One piece might be mastered quickly while another would resist for no obvious reasons. This is where understanding that memories are connected to emotions and are stored in our system for a long time can contribute to understanding and set the stage for surmounting the difficulties.

Where Are Memories Stored?

52 H. Yamasaki, K. S. LaBar, and G. McCarthy, "Dissociable Prefrontal Brain Systems for Attention and Emotion," *Proceedings of the National Academy of Sciences USA*, Vol. 99 (2002), pp. 47-51.

Since memory contains information about the past and can be consciously brought into the present or spontaneously triggered, it is fair to assume that the human system possesses some kind of "storage" system for previous experiences. For decades scientists believed that humans store memories in various areas of the brain. Subsequent research has revealed that the human nervous system itself can also be responsible for storing memories.

Scientists James and Nora Oschman describe the origins of this model thus:

> "…The brain's monopoly on memory has been eroding for many decades. Studies done as early as 1940 demonstrated that certain simple reflexes can be conditioned or learned by spinal cord neurons that have been surgically disconnected from the brain (Shurrager and Culler). This fact led to the conclusion that memory may be found in all parts of the nervous system. The brain is part of an intricate system, and the effects of stimulating, damaging, or removing certain parts does not prove that those parts are the locations of memories. Because of the interconnectedness of the nervous system, one cannot be certain that a particular evoked experience is stored near a site of electrical stimulation, or far away from it. Moreover, each region of the cortex refers to a particular part of the body. The brain and distant tissues are connected by motor and sensory nerves and by other communicating channels within the living matrix. Stimulation of a spot on the cortex may activate an intricate system that includes cells and tissues that are very far from the site of stimulation…"[53]

Co-Winner of the 2000 Nobel Prize in Chemistry Eric R. Kandel posits that memories are stored within a psychosomatic network of receptors between nerves and bundles of cell bodies with a structure whose nature is emotion-driven:

> "The moment a receptor is flooded with a ligand, the cell membrane changes in a way that the probability of an electrical impulse traveling across the membrane where the receptor resides is facilitated or inhibited, thereafter affecting the choice of neuronal circuitry that will be used. These discoveries are important for appreciating how memories are stored not only in the brain, but in a *psychosomatic network* extending into the body, particularly in the ubiquitous receptors between nerves and bundles of cell bodies called ganglia, which are distributed not just near the spinal chord, but all the way out along pathways to internal organs and the very surface of our skin. The decision about what becomes a thought rising to consciousness and what remains an undigested thought pattern buried at a deeper level in the body is mediated by the receptors. I'd say that the fact the memory is encoded or stored at the receptor level means that the

53 James L. Oschman and Nora H. Oschman, "Somatic recall. Part 2 - Soft Tissue Memory," *Massage Therapy Journal*, Vol. 34, No. 4 (1995), pp. 3-5.

> memory processes are emotion-driven and unconscious (but, like other receptor-mediated processes, can sometimes be made conscious)."[54]

The notion of memories being stored in places other than the brain originated in 1969 when the scientist Mark Bretscher discovered the extension across the cell surface of a protein in the membrane of red blood cells, with its connection between the inside and outside part of the cell.[55]

In 1975 Jeffrey Young argued further that memories are stored within many different cells and elastin fibers (exactly, as it turns out, the same means as for emotions):

> "…Memories are stored not only in the collagen network, but in the elastin fibers and even in the various cells found throughout the connective tissue: histocytes, fibroblasts, osteoblasts, plasma cells, mast cells, fat cells, etc."[56]

This knowledge can encourage musicians involved in preparation and facing problems in memorization to take a deeper look at their previous experiences, including identifying particular events or emotions with which a work might be associated.

The Emotional Content of Memory

Researchers who have studied psychology or neurology extensively are increasingly convinced that memory, besides being a source of information, also contains encoded emotions that were created at the same time the memory itself was made. Neurologists suggest that information received initially triggers the response in the amygdala (the almond-shaped portion of the brain involved with emotions of fear and aggression) and visual cortex at precisely the same time:

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54 E. R. Kandel, "The Molecular Biology of Memory Storage and the Biological Basis of Individuality," a lecture delivered at Harvard University (2011). See also C. Pert, *Molecules of Emotion*, p. 143.

55 M. S. Bretscher, "A Major Protein Which Spans the Human Erythrocyte Membrane," *Journal of Molecular Biology*. Vol. 59 (1971), pp. 351-357.

See also M. S. Bretscher, "Major Human Erythrocyte Glycoprotein Spans the Cell Membrane," *The Nature of New Biology* (1971), pp. 229-232.

56 J. Z. Young, *The Life Of Mammals. Their Anatomy and Physiology*, 2nd ed. (Clarendon Press: Oxford, 1975), p. 113.

> "…Amygdala has reciprocal connections with sensory cortical processing regions, such as the visual cortex. It has been shown that there is an enhanced response in the amygdala to emotional stimuli (i.e. fearful faces) and this response is correlated with a similar response in the visual cortex. It has been suggested that the amygdala might receive information about the emotional significance of a stimulus very early in stimulus processing and through feedback connections could enhance later perception, resulting in enhanced perceptual encoding for emotional events. This enhanced perception might underlie emotional facilitation of attention and the overall increased vigilance observed in the presence of emotional stimuli. By influencing perception and attention, the amygdala can alter the encoding of hippocampal-dependent, episodic memory, such that emotional events receive priority."57

Hence every experience and event stored in our memory will consist fundamentally of two components: first, the objective information surrounding the event and, second, the feelings associated with it. Dr. James McGaugh suggests that emotionally charged events remain in our memory for longer times than events of an emotionally neutral color:

> "It is not surprising that there is abundant evidence that memories for emotional events have a persistence and vividness that other memories seem to lack. The emotional reaction, such as arousal and the release of stress hormones, necessarily follows the event itself. In this way, events that elicit emotional responses, which are likely to be more important for survival, are also more likely to be remembered later. It is not surprising that there is abundant evidence that memories for emotional events have a persistence and vividness that other memories seem to lack. At least in part, the enhanced memory capability observed for emotional events is due to the amygdala's influence on the encoding and storage of hippocampal-dependent memories. "58

Assuming that an event takes place at an age when the brain can process both information and emotions, we remember the places and dates of important events along with the feelings attached to them. This model suggests that emotions play an important role in the process of both creating memories and in retrieving them later. On the physiological level, this process is controlled by two medial temporal lobe systems: the amygdala (associated with emotion processing) and hippocampal complex (associated with the recollection of events):

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57 D. G. Amaral, H. Behniea, and J. L. Kelly, "Topographic Organization of Projections from the Amygdala to the Visual Cortex in the Macaque Monkey," *Neuroscience*, Vol. 118 (2003), p. 118.

58 J. L. McGaugh, "Memory–A Century of Consolidation," *Science*, Vol. 287 (2000), pp. 248-251.

> "Examining the influence of emotion on memory we have primarily focused on two medial temporal lobe memory systems. The first is linked to the amygdala and is more or less specialized for the processing of emotion. The hallmark of this memory system is that it is crucial for the acquisition and expression of fear conditioning, in which a neutral stimulus acquires aversive properties by virtue of being paired with an aversive event. The second is linked to the hippocampal complex and is necessary for declarative or episodic memory. This memory system can be thought of as a primary memory system in humans, in that it governs the function most often referred to as 'memory', that is, the recollection of events at will."[59]

Either component can influence the appearance of memory: emotions can both trigger information about an event and visa versa. For example, a perfume fragrance associated with someone in particular, being detected in a neutral place unrelated to that person, will not only immediately bring to consciousness memories about events or places associated with that person, but also the emotions that within seconds will alter the mood and re-direct thoughts.

Understanding this lockstep connection between emotions and memory can be helpful for musicians during their extensive preparation phase. In a struggle with memorizing a work not associated with past experience, it can stimulate a musician to deliberately create emotional associations with a particular piece or part thereof. The emotional meaning, consciously linked to the informative part, will significantly increase the chances of the piece being stored in lasting memory and capable of being retrieved at will. During the performance itself the mind will always have faster and easier access to emotional meaning rather than information. If the strong emotional bond is formed early enough, the chances of being betrayed by informational memory will be lowered significantly.

Emotions are present for a performer not only on stage but in daily life as well, during activities both related and unrelated to live performance. Suppressed memories and emotions can all too easily affect concentration and the process of memorization. Unless a musician is aware of the importance of emotional conditioning during practice time and has the skills to

59 K. S. LaBar, J. E. LeDoux, D. D. Spencer, and E. A. Phelps, "Impaired Fear Conditioning Following Unilateral Temporal Lobectomy in Humans," *The Journal of Neuroscience*, Vol. 15 (1995), pp. 46-55.

choose and control them, emotions experienced on a daily basis are brought into practicing and will be "recorded" on both the physical and subconscious level.

The general mood in which a performer goes into practice or onto the stage, matters. Neurologists and psychologists alike speak of a dynamic known as "state-dependent memory," described here by Dr. Donald A. Overton:

> "... The positive emotional experiences are much more likely to be recalled when we are in an upbeat mood, while negative emotional experiences are recalled more easily when we are already in a negative mood. Not only is memory affected by the mood we are in, but also actual performance. We are helpful and altruistic when we are in a good mood. Conversely, hurt the ones you love enough times and they will learn to feel threatened in your presence and remember to act accordingly. There is a very close intertwining between emotions and memory. For most of us, our earliest and latest memory is an extremely emotion-laden one."60

This scientific evidence leads to the conclusion that we "learn to feel"

certain ways through a sequence of experiences with repetitive

patterns of attitudes.

Over the last several decades of research, then, scientists have discovered that memory is not only related to the human ability for processing information but has a complex and deeper side, eventually separated into a different type of memory known as *emotional memory*. This emotional memory, described briefly in Chapter 1, consists of very strong neurological activity, wired to all our senses, such that hearing a song on the radio that was heard many years ago will bring to mind not only the song but the circumstances under which it was heard for the first time as well as the emotions associated with it.

In the same way, an aroma in a restaurant will suddenly remind us of our grandmother's home and in a split second will connect it to the feelings associated with that home. Encountering a person whose features remind us of someone else will immediately recall the information and emotions associated with the person of whom we are reminded.

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60 D. A. Overton, "State-Dependent Learning Produced by Depressant and Atropine-like Drugs," *Psychopharmacologia*, Vol.10, Issue 1 (1966), pp. 6-31.

Psychologist Joseph M. Carver has argued that the emotional part of a memory begins between ninety seconds to two minutes after the informative part of the memory appears.61 This means that after ninety seconds, the person usually begin to *feel* the event the way it was felt when it was actually happening. For example, a conversation about a dear friend, parent, or teacher who has passed away may start initially in a neutral mood. However, if the subject does not change within a short time, it starts to deepen the feelings of sadness and loss.

The longer the topic remains unchanged, the more the emotions related to these memories will return, with more sad details about funerals and the reality that this treasured figure is forever gone. However, the same mechanism applies equally if there is an effort to recall a joyful event in life. Within the same amount of time, the memories will be produced, compared, classified and finally chosen. In this case, once the conversation starts, the level of energy will increase and the mood will change. How does this actually work? What actually initiates changes in our feelings?

Emotions, Memories, and Anxiety: The Role of Thoughts

From a neurological standpoint, when we concentrate on something or experience emotions, our brain produces a variety of chemicals that produce different physical responses. In his article "Emotional Memory", Joseph E.LeDoux explains the role of neurotransmitters in forming and storing memories:

> "Connection from the amygdala to networks containing neuromodulators are important in regulating brain arousal during emotional situations. Thus, connections to the brainstem neurons containing norepinephrine, dopamine, serotonin, and acetylcholine lead these neurons to release their chemicals in widespread areas, including areas involved in forming and storing explicit memories. These chemicals thus facilitate the formation of memories about emotions."62

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61 J. M. Carver, "Emotional Memory Management: Positive Control Over Your Memory" (n.d.). Link at: http://www.drjoecarver.com/clients/4935/Fil/Emotional%20Memory.html.

62 J. E. LeDoux, entry "Emotional Memory" in *Scholarpedia*, Vol. 2 (2007), p. 6.

On the physical level, chemical imbalances initiate changes in our feelings. Yet the process of chemical overproduction inevitably starts with a thought. We live within a continuous web of thinking—even when asleep. Everything we have achieved in life was first born in our minds. Achievement results from thoughts charged by emotions that direct the brain toward actions required to achieve that goal. We always *feel* what we think and hence our thoughts are constantly changing something in our feelings.

We do not usually suffer or feel joy from an event unless we first *think* in a chosen [automatic, habitual, subconscious] positive or negative direction, assigning a meaning to someone's actions and focusing on how it make us feel. A thought sparks the chemical process so quickly that it never occurs to us to even think that we can exercise any control over our feelings.

Persons suffering from chronic depression or general anxiety disorder are constantly depressed or anxious because they live within a pattern of negative thinking. When the phone rings they expect bad news, even if the call might be to inform them that they got their dream job. In terms of stage anxiety, an inordinate proportion derives from the fear of failure or of being embarrassed and humiliated. This fear also begins from thoughts. Our quick and agile brains immediately locate the "supportive" negative memories that assure us exactly the same thing is going to happen again.

Among the nearly twenty self-help books on stage anxiety that I have read, one of the very few to recognize this symbiotic relationship (though from an intuitive rather than a scientific perspective) is David Buswell's *Performance Strategies for Musicians*. The author writes:

> "What you are thinking and what you are feeling affects your performance, because mind (thoughts and feelings) and body are inextricably linked. What you think affects how you feel, and how you feel affects how you perform. If you can change your thinking, then you can change how you perform. If negative thoughts impact adversely on the quality of

> your performance, and they do, positive thoughts will likewise have a beneficial influence."63

Buswell is a strong advocate of "guided imagery," which attempts to replace negative associations with positive ones. Although the effects of childhood trauma are not mentioned, Buswell emphasizes the intimate connection between thoughts and emotions. Indeed, the perception of a thought as an original, initial impulse triggering changes in chemical processes serves as the foundation for cognitive therapy, and for good reason: when applied rigorously and with great sensitivity, it enjoys a high success rate in treating both anxiety and depression.

If we accept the notion—now backed by considerable science— that cognition directly affects the level of stage anxiety, we can exploit that knowledge in a positive direction. Being aware of the cognitive component of stage anxiety, the performer can start observing his/her thinking patterns and evaluate which of them are beneficial and which of them need to be revised.

As a rule, negative thinking is directly related to past experiences and automatic responses to them. The self-help literature is virtually silent on how far back these negative experiences may reach. Experiences at an age that pre-date the ability to make conscious and objective evaluations require special attention. Separating an event from the meaning our body automatically assigns to it is no mean mental feat. Memories of those experiences may be triggered by virtually anything. Before assigning the precise role of memory in stage anxiety it is important to first understand its mechanisms.

How Are Memories Made?

Our human brain has the unique ability to receive, store, and retrieve information. While observing, processing, analyzing, comparing, and evaluating everything around it, the brain

63 D. Buswell, *Performance Strategies for Musicians: How to Overcome Stage Fright and Performance Anxiety and Perform at Your Peak Using NLP and Visualisation* (Stansted Abbotts: MX, 2006), Kindle Location 1007-1009.

simultaneously organizes the information *and* creates memories associated with that information. Although this continuous process occurs independently from the conscious mind, the combined store of its memories are available for automatic retrieval in any given situation.

According to neurologists today, memories are created in three stages. In each of these stages our emotions play a pivotal role. The three stages are:

1. *Encoding*. During this stage the brain receives the stimulus and processes it. Scientists characterize it this way:

> "The first stage of memory, when a stimulus is encountered for the first time. Although several factors can influence how well a stimulus is encoded, the ability to perceive and attend to the stimulus is a primary factor. Several studies have demonstrated that emotion can influence attention by both capturing attention and altering the ease with which emotional stimuli are processed when attention is limited."64

2. *Consolidation*. During this second stage the information received initially is evaluated and—depending on its emotional significance—stored for some period of time. The more important the emotional content, the longer it will remain in memory:

> "After encoding, there is a period of time in which these memories are somewhat fragile and prone to disruption. It takes time for these memories to become more or less set, at which point their retrieval is less dependent on the hippocampus. It has been suggested that one reason for this slow consolidation process is to allow the emotional reaction to an event an opportunity to influence the storage of that event."65

3. *Retention.* During this stage the stored information is expected to be instantly accessible. The following scheme by Joseph E. LeDoux illustrates the process of memory formation and the role that emotions play in this process:

64 R. Fox, E. R. Russo, R. Bowles, and K. Dotton, "Do Threatening Stimuli Draw or Hold Attention in Visual Attention in Subclinical Anxiety," *Journal of Experimental Psychology*, Vol. 130 (2001), pp. 681-700.
65 J. L. McGaugh, "Memory–A Century of Consolidation," op. cit., pp. 248-251.

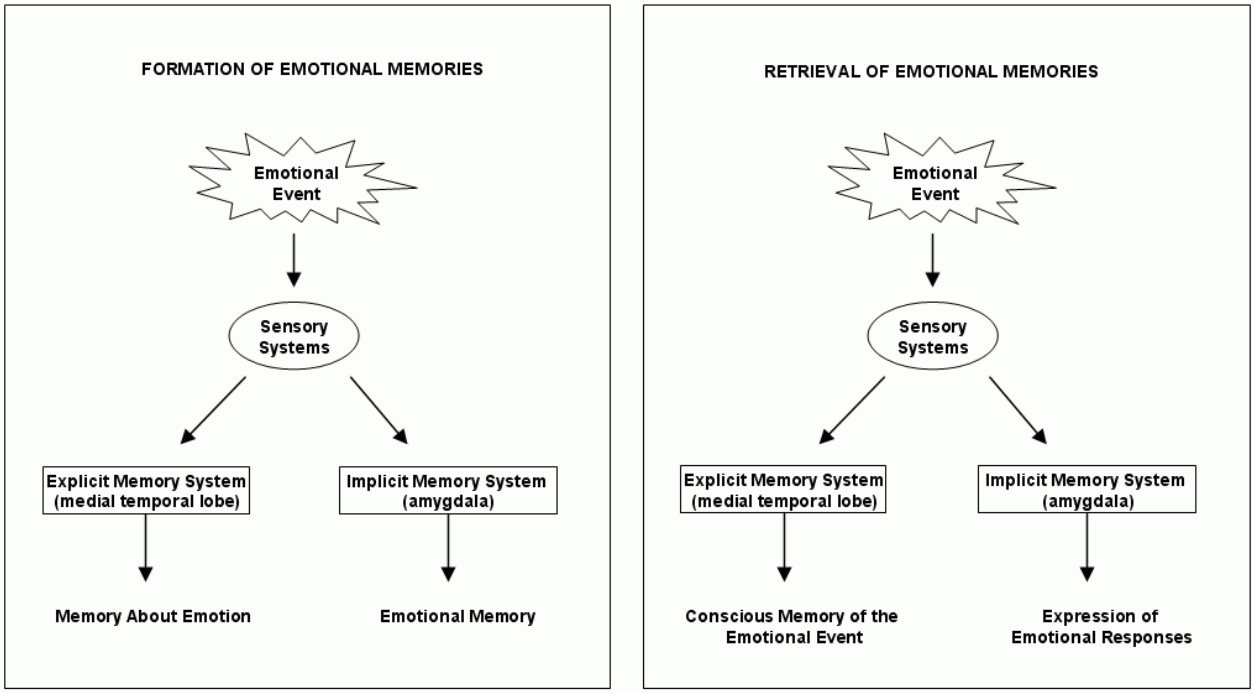

Figure 1: Emotional Memories vs. Memories About Emotions. Left: The formation of emotional memories. Emotional events are processed in sensory systems and then transmitted to the medial temporal lobe for the formation of an explicit memory about an emotional situation, and then to the amygdala for the formation of an emotional memory. Right: When a cue from the memory occurs and is processed by the sensory system, it leads to the retrieval of a conscious memory of an emotional event in the medial temporal lobe that leads to the expression of emotional responses when retrieved from the amygdala.66

Emotional memory, then, enjoys a special significance, not only in certain professional activities (as, for example, stage acting) but as the unfailing traveling companion—the *Doppelgänger,* if you will—of every person on the planet. It exerts its influence in every aspect of every human activity. The strength of this influence depends on the richness and breadth of

66 J. E. LeDoux, "Emotional Memory," *Scholarpedia* (Center for Neural Science, NYU: New York, 2007), Vol. 2, p. 18.

one's emotional memories, of their collective force, their stability and, most importantly, their quality.

Cognitive neuroscientists have now begun to elucidate the precise psychological and neural mechanisms underlying emotional retention within the human brain:

> "…The amygdala is a brain structure that directly mediates aspects of emotional learning and facilitates memory operations in other regions, including the hippocampus and prefrontal cortex. Emotion-memory interactions occur at various stages of information processing, from the initial encoding and consolidation of memory traces to their long-term retrieval. Recent advances are revealing new insights into the reactivation of latent emotional associations and the recollection of personal episodes from the remote past."67

The intensity of emotions associated with an event determines how the memory about it will later be enhanced or impaired. Emotionally charged events are different in their very nature, and responses to them are very subjective. This is especially true when the content of the experience is of a physically or psychologically painful nature.

Low levels of emotion during the retention stage means that the information—for example, what outfit your friend wore last Thursday—will soon be discarded since the mind/body finds it unnecessary for its well being. On the other hand, moderate levels of emotion during the retention stage will enable an individual to recall vividly many details related to—and even unrelated to—an event. This is the ideal circumstance for the formation of positive memories. Experiences in which the level of emotional intensity was overwhelming, lead to a persistent re-experience of an event, and sometimes even to memory loss. These intense memories almost never appear because one searched consciously for them. On the contrary, they can be triggered by virtually any inter or outer stimulus.

In clinical practice such memories are classified as traumatic, and consistent re-experience of them is associated with PTSD (Post-Traumatic Stress Disorder). Intense emotions

67 K. S. LaBar and R. Cabeza, "Cognitive Neuroscience of Emotional Memory," *National Review of Neuroscience*, Vol. 7 (2006), pp. 54-64.

are associated with the steroid hormone cortisol, which in high levels can affect the normal function of the hippocampus (the portion of the brain responsible for memory) and suppress the ability to remember. The same hormone is implicated in prolonged stress and a general weakening effect on memory retention.68

The Congruence of Emotions and Memories: What the Science Teaches Us

When brought together, modern science, then, teaches us a great deal about the relationship between emotions and memories. It teaches us that chemical reactions begin with a thought that leads to an emotion. Based on the scientific evidence we can conclude that the informative and emotional parts of memory are stored not only in the brain and the nervous system, but that they reside at the level of receptors, cells, and even molecules, creating one integrated system.

Science also teaches us that past trauma can have a long lasting impact on both the present and the future. Understanding stage anxiety from an integrated mind/body perspective can motivate us to take a deeper look at the underlying causes of severe stage anxiety—causes that are not linked to traditional reasons such as lack of preparation, illness, or sleep deprivation. In the vast self-help literature the persistent treatment of immediate symptoms rather than their root causes can actually cause a sufferer from severe stage anxiety to feel even more pessimistic about ever overcoming their debilitating symptoms.

Science teaches us that stage performance is recognized by brain as an innately stressful situation. Hence the chemical chain of impulses and responses within the entire bodily system is virtually the same as it would be in a life-threatening situation. The triggering of the "fight-or-flight" response interferes fundamentally with concentration and memory. In cases where the performer was previously exposed to a significant amount of trauma or continuous stress, the

68 J. Metcalfe and W. J. Jacobs, "Emotional Memory: The Effects of Stress on 'Cool' and 'Hot' Memory Systems ," in D. L. Medin (ed.), *The Psychology of Learning and Motivation: Advances in Research and Theory*, Vol. 38 (San Diego: Academic Press: 1998), pp. 187-222.

emotions and memories, stored over the years not only in the brain but at the cellular level, may be triggered on stage by virtually anything, including otherwise benign stimuli such as lighting, smell, the temperature in the hall, or a wall's texture or color.

Authors Randy L. Buckner and Wilma Koutstaal explain that even a partial reminder of a traumatic event can stimulate the brain to search for associations:

> "… Specific reminders of an emotional event are less common than reminders that only partially cue an emotional event. The re-experience of an affective state may serve either as a selective reminder of the original encoding of a particular event or as a reminder of similar affective experiences from the past. Even a partial reminder of an emotional event, may trigger a search process for an emotional event associated with the context of the conversation. In this case, the search process itself leads to activation of the amygdala and medial PFC. Connections between these and other retrieval-related brain structures contribute to the recollection of the original emotional event. Upon recollection of the event, brain regions associated with retrieval success become active, along with further activity of the emotion-related structures in response to the internally generated emotional stimulus"69

Science also teaches us about the risks of pharmacological solutions for stage anxiety. The June 2013 edition of *Forbes Magazine* includes an article about the extensive use of beta-blockers in British hospitals. Patients with no previously known cardiac conditions were routinely given beta-blockers before surgery to prevent anxiety. Yet British research investigators arrived at a somber conclusion resulting from this regular practice:

> "Beta blockers keep blood pressure low and it looks like the combined effect could mean patients can't sustain adequate blood pressure to survive, or to avoid having a stroke. Last summer, British researchers published a paper raising the possibility that by following an established guideline UK doctors may have caused as many as 10,000 deaths each year. Now, they have gone a step further and published an estimate that the same guideline may have led to the deaths of as many as 800,000 people in Europe over the last five years."70

Of course, for some patients under the ongoing supervision of a competent psychiatrist, drugs such as beta-blockers can be career-altering—indeed career-saving. Yet the number of performers who depend, for example, on beta-blockers to diminish stage anxiety without having

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69 R. L. Buckner and W. Koutstaal, *Functional Neuroimaging Studies of Encoding, Priming, and Explicit Memory Retrieval*, *The National Academy of Science* (1998), p. 32.

70 *European Heart Journal*, Vol. 35, pp. 131-137.

been thoroughly screened for a cardiac condition is—at least anecdotally—alarmingly high. Oftentimes these drugs are recommended and supplied not by medical specialists but by friends or even teachers who have no understanding of the long-term health risks.

The emerging science behind cognitive therapy leads to the well-grounded hope that we can train ourselves to consciously choose positive over negative memories. By tapping into positive memories we can change our mood, increase our energy level, influence our brain chemistry, and ultimately find the resilience to weather stressful on-stage situations.

The combined scientific evidence provided in this chapter should embolden performers with severe degrees of stage anxiety to delve deeper into its roots. These roots are themselves unique to each individual, yet if the various strands of recent scientific thought are brought together the affected performer will realize, for example, that the advice to simply breathe deeply before going on stage might need to be combined with other more thoroughgoing solutions. In my last chapter and the Epilogue I attempt through a rigorous self-examination to put the science behind stage anxiety to work.

Chapter 5

My Performance Career

Growing Up in the Soviet Union

Life in Russia, beginning with the imperial period and right up to post-Perestroika, was never easy. For centuries Russians have suffered, endured, and learned to accept. This includes the severe climate as well as the politics — I have in mind that overwhelming percentage of people unlucky enough not to have been born into a family of politicians or oligarchs. Russians have long felt powerless to defend themselves against either collective or personal injustice. People had to get used to it and adapt, each in his own way.

The environment made people strong: they continued to believe that better times would come, continued to react with humor to every setback, and many of them found escape from reality in reading. Religiously, the USSR was an atheist state, and people who believed in something more powerful than the human mind or the Politburo were punished. The most fortunate were those who found a way to tear themselves away from reality by going into science, art, or professional sports, where they could embrace an alternative reality in which everything depended only on themselves.

As I was growing up in Russia, that is how things were. I remember, as a child, asking my mother: "Why and for what purpose am I studying music?" To which she replied: "So that you will have something in life that will never betray you. The government can betray, a husband can leave you for another woman, but music will always be with you. It is honest: what you put into it, you will receive back."

My mother, who was my biggest authority figure, a person with many talents and a higher degree in music, was severely beaten up by thugs right in front of me when I was 4 years old. After that event her emotional reactions were very poorly controlled. There was no

treatment for what we now call post-traumatic stress disorder, and she found no help. Driven by the fear of dying any day due to her severe injuries, she felt the need to prepare me and my brother for life without her. Her methods were tough, but so was the world for which she needed to prepare us …

The harsh Russian reality formed very strong people and, in turn, very strong professionals. That related especially to sports and the arts. Our music professors did not just do their work, they lived it, just as they lived for us, their students.

The salaries of professors in Russia are still, to this day, among the lowest in the country, and that is why people who want to bind their lives to the arts, and pedagogy, understand that it will be a labor of love—unconditional and with scant compensation. Our teachers infected us with their obsessive devotion to music; they lived being cut off from reality or, more precisely, in another reality—one that was more beautiful and lofty. The relationship of the Russian pedagogue was a parental one: the pupil would come to the teacher equally for advice on a music matter or on a life problem. And just like a parent, they did everything to get their children to play well. A Russian teacher will work with a pupil well beyond the appointed lesson time, indeed for as long as needed.

Especially revealing was the attitude of pedagogues toward preparation for concerts or competitions. The students would go to their teachers' homes and the teachers would work with them for up to six hours, free of charge, with a break for lunch, which the teachers themselves would have prepared for their pupils. If there was no chance to get into the venue for rehearsal during the day, the teacher would find ways to smuggle students in at night, bringing pillows and blankets for those waiting patiently for their turn to go on stage and test the piano.

In the presence of such an intimate bond, it would not even occur to a student to be offended at harsh criticism or reproaches for work not done, or not completed well enough. We all understood clearly: if the pedagogue is criticizing or shouting at us, that means he cares about our professional potential and growth. More frightening than anything was to hear the

cold: “You must continue to work on what we discussed at the last lesson.” In Russia there is still no fundamental or legal understanding of “abuse” except as a crime; hence abuse is restricted to only severe physical or sexual abuse.

The Soviet Union and post-Soviet lands were guided by a slogan: “The method is not important as long as the result is present.” Parents raised their children based on this slogan and cultivated in them the traits required for success. Likewise, pedagogues and trainers, guided by this slogan, cultivated true professionals.

The entire culture and the whole concept of the Soviet Union was oriented toward this result, and not only the best possible result but the *best in the world*. That covered all human domains: the harvest, metallurgy, scientific discoveries, and achievements in the arts as well as in sports.

Accordingly, in all families of my generation, children were essentially educated in the same way: We did not cultivate music, sports, ballet or art “for fun”. “Fun” was for the circus, the zoo, the sandbox, or extracurricular activities in the Palace of Pioneers, but not in the domains of music, art, sports, or dance. Those areas were the holy of holies, and those who dared to come closer had to treat it with reverence, to be ready to serve and sacrifice everything. For example, in classical ballet it was a rule that ballerinas could not have children and should consider a pregnancy the end of their career; the same for rhythmic gymnasts and other female sports.

From infancy, children in the Soviet Union had an unparalleled opportunity to achieve the highest professional level in any chosen field. They could do this by attending government-run schools, which were virtually free but had a rigorous selection processes. Gifted children were supported generously by the government, since they were viewed as “The Future and Hope of an Invincible Country.”

The job of parents was to make sure that their children achieved the highest possible results in the area of their talent; the methods used to achieve these lofty goals did not matter.

Many children ended up being severely abused by parents who believed that since they were raising an exceptional member of the society, they needed to squeeze everything possible out of their child, regardless of the emotional costs to that child.

Gaining admission into music schools was fiercely competitive, especially since the cost was only $2 a month and every teacher held the highest advanced degrees in music. Children were evaluated by a committee, consisting of 8-10 members, and they either passed to the next round or were advised to find a group/club where they could study what they liked without the aim of making it their profession.

All music schools were equipped with two concert halls. There were almost as many music schools as there were general-education schools; no area in a city of any size was without a music school.

Upon admission, from the first grade forward we were given private piano lessons twice a week, solfeggio class twice a week (by the third grade we were expected to to take a 3-voiced dictation), Russian and foreign music literature, and choir. We were obliged to perform 6-8 times a year: 2 academic concerts, mid-year and end-of-year exams, 2 technical tests (one on scales, the other on etudes), and 1-2 class concerts. Each pedagogue had 15-20 pupils in class and presented the results of his/her work by way of organizing concerts where all of the pupils performed.

The concerts took place in the concert hall of the music school and were open to the public. After the concerts, we would all gather in the classroom where our lessons were usually held; after some refreshments the parents were sent on their way and we would settle into a "flight analysis." This was not a critique from our teacher but rather a professional analysis of what had succeeded and what had not. Every piece that had been performed was scrutinized. The first comment was granted to the pupils themselves: each of us had to identify the strong points of our own and other students' performance, as well as the weak ones. Then the other pupils added to what had been said, and finally the teacher, in turn, added his/her critique.

I consider this to have been a deeply professional approach: knowing that each of us would offer a detailed analysis of every performance, we listened very attentively to each other, formed our own opinion about the music, and learned to express our thoughts in our own words. This process taught us both modesty and the ability to be self-critical in a constructive way. We had to learn to accept another person's opinion about our own playing, even if it was not positive. It motivated us to study; sometimes it brushed up against pride, especially if someone of our same age had played better.

We were growing into the highest professional and human-aspirational standards. We were highly competitive, with an unquenchable desire to delve deeper into music, to get deeper into the secrets that define great performers. We invented exercises to address different technical challenges, we played for each other, attended cultural events together, composed music, and shared it all with each other. We had no inkling of the "cruelty of the world of art" about which adults spoke.

Competitions and Crisis

In childhood I was always very artistic and was always dying to be the center of attention: the huge stage of our huge concert hall in the music school, the huge concert grand piano on which we played—all this fully satisfied my craving for attention and the feeling of my own self-worth.

During my childhood, then, performing gave me enormous pleasure. I was alone on stage, and nobody told me what and how I should play while I was on that stage. I felt almost like a goddess, capable of taming the huge monster known as a concert grand piano. I literally towered over everyone, since the stage was elevated and the first rows of the hall began rather far from it. These were the moments for Natasha's rules. This was especially important because it contrasted sharply with the unrelenting efforts of my mother to otherwise control my every movement. The stage and the piano were a sacred domain where I was in charge.

I considered every stage appearance to be a performance, including exams and competitions. In my childhood I did not experience stage fright at all; on the contrary, I would rush to be first on the stage for every exam and every audition, evoking the chagrin of my peers and the delight and admiration of their parents and grandparents. I invariably rushed onto the stage with a huge smile on my face and in my heart.

Seeing and admiring my love for public performances, my teacher started to introduce me to a variety of performance opportunities. From the age of eight I started to participate in piano competitions, competitions for young composers, duo competitions, etc... I received award after award, always feeling deserving and sure of my status at the top of the heap. Surprisingly, competitions also did not make me feel anxious. I gave no thought to the prizes or how they might change my life. Not even for a second did the thought of any kind of failure cross my naïve mind.

I derived pleasure from absolutely everything related to the stage: from the special lighting that existed nowhere else, to the fact that all eyes in the concert hall were directed only at me, and everyone was poised to hear me play.

Most of all, I loved the sound of an enormous concert grand piano — the acoustics of a large concert hall made this unique combination of power and lyricism both unique and unforgettable. The fact that I could play now quieter and then louder, all at my own direction— this freedom and power would plunge me into indescribable delight.

Until the age of ten, all my performances were uniformly successful (at least that is how they seemed to me), and everyone around me only praised me and claimed to be enchanted. I began to give recitals at an early age — first in different cities, and soon after internationally. This was especially flattering since the Soviet Union only allowed the best of the best to represent our country.

The first performance that left a bad aftertaste in my mouth and engendered feelings of mild disappointment in the audience was a relatively harmless polka by Tchaikovsky that, prior

to the concert, was playful and spirited. But on the day of the performance—or, more accurately, at the moment I came out on stage—something suddenly changed. The concert hall was packed; this was the first time that such a large audience awaited me, and it frightened me. I cannot remember precisely why: perhaps there were so few familiar faces among the audience; perhaps I felt feeling of responsibility towards them; or perhaps I had suddenly become aware of the high-wire nature of performance.

Seated at the piano, about to begin, it was not that I was worried, but I somehow could just not concentrate on the music. Instead, I kept thinking: "Why are there so many people here? Who invited them?" I did not actually stumble or forget notes, in fact, I did not make any mistakes at all. It was just that I was not present in the music, resulting in — as my mother said not too tactfully after the performance — that I had played "like an organ grinder." For the first time in my life I had just wanted to get it over with. Alas, many of my classmates from school were also in attendance.

After I finished playing the polka I went down into the audience and sat next to my mother, who proceeded to shower me with criticisms unsuitable for print; to this very day I continue to replay that performance in which, according to her, I "shamed and disgraced everyone." At ten years old I had no idea that this scenario would play indefinitely in my mind. I had no idea at all how the brain, and the feelings and emotions attached to it in the ways I described in Chapter 4, worked. Coming off the stage, I did not feel that it had gone all that badly. But for years my mother continued to say before each recital: "If you play like you played that polka, you will be in so much trouble you can't even imagine."

That performance or, more precisely, my reaction to my mother's words evoked in me very deep feelings of guilt and fear: fear of the consequences of unsuccessful performances, fear of not being accepted and loved by the closest person in my life, fear of her "cold shoulder" - when for punishment she would not talk to me for a month. I was frequently punished physically and psychologically for poor performances and other "lack of effort."

That performance also had a seemingly positive side: I began to be aware of my responsibility towards my audience, and I began to study more consciously and conscientiously. Yet this feeling of responsibility and of a perceived necessity to please everyone began to replace the sheer joy in music that I used to have. Much-much later this event forced me to think about the role of authorities such as parents and teachers in a child's life. Still, I did not think of that event as a turning point; the major crisis would come later.

There were other successful performances, including tours abroad at the age of twelve, after which began my "star fever" and I stopped practicing almost completely. As a result, I played atrociously at the entrance exams for the esteemed college named after Rimsky-Korsakov. Attached to the conservatory curriculum and teachers, the second most prestigious (after Moscow) educational institution in Russia attracted young musicians of exceptional talent from all over the huge Russian nation. The level of the 14-15 year old performers was incredibly high. My final grade was not sufficient for admission. This was for me a sobering moment: I now understood how rigorously people who have decided to work professionally in music prepare themselves.

So, I made a personal decision to enter this College at all costs, studying day and night for a whole year to prepare myself for the exams. I worked the whole year no less than ten hours a day, and at times ten to twelve hours. The pedagogue who took upon himself the task of preparing me for acceptance to the school was a member of the admissions committee and a teacher at the school who knew precisely at what level one must play to gain admission (to the Russian way of thinking - no "conflict of interest" was at work here).

I was assigned a demanding program: Beethoven's *Aurora*, Liszt's *Tarantella*, his etude on Paganini's 24 Caprices arranged by Busoni, a 4-voiced Prelude and Fugue of Bach, the Op. 25, No. 12 Etude of Chopin, and some contemporary composition that I no longer recall. All the above-mentioned works required the highest level of technical facility. This level of ability presupposed the student performer's development and increasing level of mastery starting at

the age of five. By the age of fifteen he/she had to have completely conquered the full range of any possible technical difficulties in any composition, or at minimum to be fully ready to overcome them.

Since I had been neither diligent nor constant in my childhood studies, the absence in my arsenal as a pianist of a transcendental Lisztian control made itself known immediately. It forced me through superhuman efforts to prepare my program. The greater part of the time was spent in the mastery of extremely challenging and unfamiliar techniques. Yet not even an entire year of preparation proved to be sufficient for giving me that feeling of absolute assurance.

Not surprisingly, I was terribly nervous before the performance. Now I knew the standards. I felt that my playing still lacked much, and my sense that my future—my fate, if you will,—depended on my acceptance or non-acceptance created enormous psychological pressure. Apart from the desire to continue learning about music and performance, I had been told by my mother that in the event of non-acceptance I would no longer be supported financially and will need to take first available job to support myself. I entered the classroom, where the committee sat scarcely at the table right next to the piano in a half-paralyzed state. From such close proximity the eight members of the committee could clearly see each movement of my hands, the pressure on the pedals, changes in my facial expression; while for me, their intent gaze, their breathing, their finger-tapping on the table, and other sounds definitely did not contribute to my concentration. I played the entire Bach prelude with eyes tightly closed, trying mightily with every fiber of my body to focus on the voicing, the dynamic nuances, and the quality of the created sound. I managed to succeed, even though my entire body was trembling as one does after the most intense physical exertions.

Exhaling, I began playing the fugue. I performed the first page very organ-like, which still demanded enormous efforts of concentration and intense, deliberate listening to what I was doing. But then, on the second page, a catastrophe occurred: I was listening intently to the melodic line of the middle voice and….got lost. I could not remember at all where the other

voices were supposed to go. I had been playing this fugue throughout the year, from various positions; in separate voices; in combinations of two, three, and finally, four voices; and I was certain that I knew them through and through. This had never happened to me at a single rehearsal, in a single lesson, anywhere, ever.

I decided to listen to the highest voice, and began where I had lost my place. The same thing happened. I was betrayed by both muscular, auditory, and visual memory. I missed an entire section, returned somehow to the introductory theme and managed to "complete" the fugue. Then I experienced for the first time in my musical life real hysteria: I could not proceed to the next work, and I fled the classroom. I was sobbing uncontrollably in the hallway, to where, about five minutes later, the entire admissions committee came out. The chairman of the committee said: "You did not abandon it, you pulled yourself together and finished; there was much that was admirable in that. Now go wash your face and come back to play; we don't have much time." Suddenly I felt calmer and supported; remarkably, the rest of the program went well and I was accepted at that institution.

Nonetheless, the stain remained. This was the first time when the thought that my performance might hold an unpleasant surprise over which I had no control entered my mind. It was not just a temporary crisis; ever since that day I have come to expect that something unpredictable will happen on stage. The longer nothing goes wrong, the more nervous I get, bringing into reality memory slips and losing the beauty of the music itself, having become desensitized through my own negative expectations. Again, when this first occurred I had no idea that the stain was for all practical purposes a permanent one.

The emotional trauma of my entrance exam was so intense that I still replay its every detail. I remember what clothes each of the committee members wore, the exact time and day of the exam, the color and texture of the curtains, the lighting, the posters on the walls— even the dates on them. That singular event shifted my motivation and reason for being a musician from

doing it for the love of music to simply proving to myself and others that I can indeed be a stellar performer.

The surest way to gain approval from others—a huge component of Russian culture—and regain your reputation, was to resume participation in competitions—but with a different mindset from the one in my childhood. Then, the purpose of participating was to find out if this activity should grow into a profession or become a hobby, to simply enjoy playing for different people in different venues, and also to see how many other kids are doing the same and to learn something from them. Now, the goal was simply to win, to receive validation from professional musicians, and to get back the sense of belonging in the world of performers. Yet even though I won more than my fair share of competitions, none of them gave me the satisfaction for which I was hoping. Surprisingly, awards and diplomas, recognition, and invitations did not render me more confident on stage. On the contrary, success only intensified the specter of something horrible always about to happen—a catastrophe that could ruin my career and even my life.

Conservatories, Cosmetics, and Funerals

By the time I was accepted to the Rimsky-Korsakov College of Music, the Soviet Union had collapsed and the new system brought with it an entirely new mentality, life standards, and values. Music as a form of "pure art" had collapsed as well. There was no food in the stores, and only limited food stamps from the government for the selected kinds of groceries that might become available. Whether winter boots or wallpaper, people queued up in endless lines for everything, often waiting for three days and nights (or even longer) in order to get what they needed.

Factories subsidized by the government quickly began closing. People worked without paychecks for six or even twelve months; even then the compensation often took the form of something that the factory manufactured. Fifteen kilograms of socks may keep your feet warm,

but they do not put groceries on the table. Scientists, engineers, people of the highest ranks were forced to become street vendors in an attempt convert their “salaries” into actual cash.

Everyone had to figure out how to survive and to adjust to this new system. Mikhail Gorbachev gave everybody the right to pursue private enterprise, but he offered no tips on how to do it in an honest and safe way. Those who knew only the Soviet Union way of living, with free education, medical assistance, and a secure job immediately upon graduation, who knew business only as profiteering that was prosecuted (full confiscation and 15 years in jail) could scarcely process these changes. The 1990s were marked by suicides, crime, murders, and corruption; alcoholism became a national problem in every level of society.

All services from universities, clinics, funeral homes, hospitals, even ambulance and paramedics—services that were once free—now suddenly became increasingly expensive. In order to have a chance of being accepted to a college or university, a candidate for admission was told to hire someone from the committee, take private lessons no less then 3-4 times a week for a year (in 1991 the cost for private tutoring started at $200 an hour for an Assistant and $400 an hour for a Professor). To receive medical care one needed to bribe the doctors, and so on.

This new system forced people to be creative: plenty of Limited Liability Corporations (LLC’s) swindled millions of people, taking advantage of their naïve believe that the government would still take care of them. Major defaults were a daily occurrence, and the Russian currency declined precipitously in value. One day, the news calmly announced that large bills would no longer be accepted anywhere, and millions of people lost their life savings.

These dramatic changes affected the arts and education. Professors and teachers began to expect “gratitude” for everything they used to do for free. Everyone was now concerned only about the survival of their own families, taking advantage of the positions they held, exploiting students and their parents for “extra income”.

Piano competitions—even international ones—held in both Russia and post-Soviet Union territories were no exception to these new realities. Several times my first place finish in a competition resulted in the financial portion being withheld, explained as: "The jury reserves the right to make decisions about financial aspects of the awards…" Competitions became a revenue stream for jury members, losing almost entirely their original attraction of gaining exposure and influencing the careers of promising musicians.

Classical music no longer fit into the picture of the life well-lived, — low in compensation but high in satisfaction and worth. It gradually turned more and more into a business. A music career seemed more and more untenable. Those who persisted in making a profession out of it either had to be absolutely obsessed with music or simply delusional.

In the middle of the Soviet/Russian crisis I experienced crisis in my own life on a regular basis. Over the five years that I was a student of the Rimsky-Korsakov College of Music, I lost virtually all of my childhood friends, my best friend, my grandfather, and my uncle. Attending funerals on more or less consistent basis definitely did not contribute to my overall positive outlook.

Besides a steady stream of funerals, a crisis was occurring in my College. The new mentality inspired institutional authorities to take advantage of students by artificially creating situations for them that could be solved only by chairs, deans, and deputy-heads. Desperate students who mysteriously failed exam after exam eventually realized that they needed to buy a 'pass' on an exam or to pay to the above-mentioned authorities in order to solve their "educational problems." Those students who had well-connected or rich parents would get out of situations pretty easily; some young female students whose parents could not pay or who disagreed with this predatory behavior had to choose between their moral principles and a diploma.

I experienced this business machination just two weeks before my planned graduation, when the head of the piano department found me guilty of making " wrong choices." I was

expelled without receiving my diploma. This shocking event—one of the major crises in my life—forced me to find a job completely unrelated to music. I interviewed successfully with a high-profile American cosmetic company opening operations in downtown St. Petersburg and was immediately offered a high starting salary with open career opportunities. This was the new Russia, the new standards, and the new life.

My three months of employment with the cosmetics company were among the most valuable in my life in terms of providing full understanding of the role that music plays in my life. Working thirty-six hours shifts standing on high heels did not leave either time or energy to practice. After ninety-three days without a piano, it became blindingly clear that for me life without music as a profession did not make any sense. No amount of money could compensate for my inner emptiness and grief that another day had passed without my touching the instrument.

I decided to return to the College. I first had to satisfy the Piano Department Chair's demand that, simply in order to qualify for the fourth year (which I had already all but completed), I had to pass 38 subject exams in two weeks, obtaining a document from each teacher vouching that I corresponded to the 4th-year level. For this forcibly repeated year the Piano Department Chair created a contract, which stipulated that I would be paying monthly tuition for my education, which was still officially free for everybody else.

Upon graduation I learned that, since our Department Chair was a part of the Committee of each and every musical institution in St. Petersburg, I would not be accepted into any of them. Fortunately I was accepted into two very competitive programs in Moscow. I finished both a Bachelor's Degree in Piano Performance and Pedagogy from the Russian Academy of Music (named after the famous piano teacher known simply as Gnesina) and a Ph. D. in Pedagogical Psychology from the University of Culture and Art. For personal reasons I then relocated to the United States. Little did I realize that the traumas I had experienced in both the Soviet Union and the new Russia would board the plane with me to America.

Negotiating the New World

Making major changes, such as relocating to another country, and life in a new society subconsciously sets expectation for major change in every area of life into motion. People tend to believe that new places and new experiences will bring new and positive emotions, new thoughts, new behaviors, and new responses to new situations.

Having demonstrated the ability to overcome serious obstacles in my life, I believed that I was healed from all my traumatic experiences. That reality seemed confirmed from the outset: despite cultural shock, adapting to a new mentality, and learning to communicate effectively in English, my initial performances in the United States proved joyful and successful. I got accepted into the graduate program at UCLA and was blessed to join the piano class of an amazing musician, Professor Vitaly Margulis.

During the years I studied with him I performed consistently and recall almost every concerts. However for the most significant one, which was my Master's recital, I have virtually no concrete memories. I was well prepared and when things should have gone most smoothly I was suddenly hit with powerful physical symptoms of anxiety. For the first time in my life my stomachache was so severe that I could barely breathe, much less concentrate.

One of the works in my program was Beethoven's Sonata in C Minor, Op. 10, No. 1. According to my current advisor Prof. Winter, who was in attendance that day, I began to suffer memory slips already in the first movement. I could not keep track of the meter attached to the frequent dotted rhythms. I got lost in the transition to the second theme.

When I finally reached the finale of this three-movement work my rendition of the simple *Prestissimo* opening theme in eighth-note unison theme, bore almost no relationship to the notes in the printed score. I do not remember at all how I got through the remainder of the movement. I just wanted it to be over.

I had one more such experience a few years later when Prof. Neal Stulberg (our Director of Orchestral Studies) invited me to play the Saint-Saëns Piano Concerto No. 2 in g minor with

the UCLA Symphony and the student conductor Jorge Uzcategui. I had ample time to learn the work, which was in no way even one of the more difficult I had ever tackled. I had memorized the work many weeks before the performance was to take place and felt fully prepared.

However, on the eve of the performance, I was again overwhelmed with fear and panic. Prof. Gloria Cheng, with whom I studied briefly after Prof. Margulis's untimely death, assured me on that evening that it would be perfectly okay to perform with music score (what was good enough for Liszt was certainly good enough for me). What gave me the courage finally to take the stage was a close friend who loved Prof. Margulis as much as I did simply telling me to go out and play for him.

My real-time perception of this performance turned out to be much worse than what I subsequently heard on the recording. I was quite surprised with how energetic, committed and accurate, except for minor losses, the performance actually was. Somehow it had worked-out even in the face of total fear. But the wound of trauma remains.

The symptoms in these two cases were in some respects quite different, yet they all came ultimately from the same place. They brought back the specter of seemingly unpredictable panic and fear. On the other hand, I also experienced performances with not any less demanding pieces in the program, which I was able to execute in a completely relaxed state of mind. There was simply no predicting …

By now I realized that all of the traditional explanations with which I had been indoctrinated—insufficient preparation, poor lighting, audience disturbances, etc.—offered no path to self-understanding. I was finally forced to acknowledge that the reasons in my own case had to be grounded in traumas still living deeply within me, the effects of which I had thought myself long since cured. That is what emboldened—indeed compelled—me to commence my large-scale search for answers; answers that required hundreds of hours of research.

My Past is My Power

The evaluation of any performance depends on how, where, and under what circumstances one's aesthetic tastes were formed. It depends on what values and standards of performance were instilled during the formative years as a musician, in what kind of society a person was raised, what cultural influences were at play, what people surrounded the person, the initial impetus for choosing music performance as a career, and the current reasons for continuing to pursue this career—in other words, absolutely everything that formed and continues to shape that performer as an individual.

In the course of this study I have gone from a hunch to a supposition to an absolute certainty that a wide-ranging overview of the historical, cultural, and personal circumstances under which I was formed as a professional and as an individual provide much more fertile ground for understanding my own stage anxiety than the whole assortment of immediate stage-adjacent paramedic interventions. Of course I realize that I need to be prepared, to offer recitals more frequently, to breathe and sleep more deeply, and to maintain the healthiest diet. But I had reached the point where I knew these were no longer enough.

Traumatic losses, unjust and often futile situations formed me as a musician and as a person. Without those experiences, ironically, I would not be able to fully understand the importance of music in my own life. Without the persistent recurrence of anxiety symptoms I would never have found the courage to investigate so deeply the root causes.

As I could see more clearly later, changes that were happening in my country, the microclimate within my own home, the multiple deaths of my friends who passed away one after the other at extremely young ages, and the predatory yet unpunished behaviors of those who abused their authority—all these and more continued to erode my self confidence on a daily basis. At that time I could not imagine ever feeling actually grateful for these experiences, even to the point of considering them as the source of my power.

Music in the middle of all this pain became for me a form of religion, the only way to escape my grim realities. It allowed me to genuinely suffer—a circumstance perfectly suited to the tragedy that had become an absolute "must" for any serious artist in Russia.

The repertoire I chose at that time was exclusively in minor keys; my day-to-day practicing was filled with dark emotions and thoughts. These soul-purifying experiences raised profound questions and tested the extent of my loyalty to music.

Virtually all of the tragic events in my life were suffused with music, some of which I clearly remember. I strove to determine if there was a connection between music that gives me emotional discomfort or severe anxiety for no obvious reasons and the memories that would trigger it. Oftentimes the information would not come into my conscious mind, but the emotions at the physical level led me to the intuition that my body somehow remembered at a level well below my consciousness. This dawning inspired my research about the possibility that we not only store our memories in our brain, but also on the deeper level, which might not be directly related to the memory mechanism.

For many years I had a very sharp emotional response to Chopin's first published nocturne, in B-flat Minor, Op.9, No 1. I would invariably burst into tears while explaining it away as just my hypersensitivity to everything—or perhaps to the key itself. The unusual dimension of this experience was that whether I liked the way it was performed, or disagreed with someone's phrasing, or had issues with the tone quality, it still had the power to make me cry. I also understood that these tears did not arise out of my admiration for this music; the reaction was triggered by some pain deep inside. When I started to develop a stage anxiety questionnaire I searched more deeply for scientific evidence that might support my emotional reactions. After piecing together the supporting information on emotional memories and its connection to music and other stimuli, I made the decision to learn the Nocturne, realizing by that time that I either needed to create an alternate emotional base from which to remember the music, or it would unearth some long-buried emotions attached to a specific event.

Whenever I attempted to sight read this relatively easy piece I felt as if my hands did not belong to me. They were cold and disconnected from my body. I wanted to keep my elbows at my ribcage, remaining as closed as possible. Alone in the room, I began to experience classical symptoms of stage anxiety—muscle tremor, dry mouth, pounding heart. The first measure made me cry as always, but I could not remember any information as to why.

After numerous unsuccessful attempts to recall anything, I created my own exercise for retrieving emotional memories. Consistent repetition of this exercise led to recollection of the actual event: I saw myself standing in the kitchen at four years old, next to my mom, who was laying absolutely still and without any signs of life. On the right side of the table stood a man and a woman who just had beaten her up. The man was holding a big knife.

I asked him who he would kill first—me or my mom. While waiting for the answer I heard the opening theme of the B-flat Minor Nocturne from the radio. I had became aware of the radio when I entered the kitchen; at that moment there was a soft conversation that I did not pay attention to. The music started exactly after my question to the attacker.

I felt totally helpless and, for that reason, very guilty. I felt hatred, but I could not understand it since I had never experienced it before. I felt even more desperate because my father was not home to protect us. I felt completely unprepared to face my mother's death. The music became a background for this scene and all mentioned above feelings. The Nocturne unfolded at its leisurely pace for 5-6 full minutes, during which time the attacker did not provide me with any response. The woman attempted to escort me out of the kitchen, but I refused, sensing that if I remained they might be more reluctant to kill her. The music burned deeply into my subconscious, linked inextricably to the horrifying images. Later I recalled a lot of other details that a child's brain automatically suppresses or cannot process. I blocked any memories for more than two decades, only able to tap into the tragic emotion triggered by the music.

I attended several of Russia's first-tier music schools. The role of emotional memories, psychological traumas, or painful experiences and their possible relation to stage anxiety were

never even broached at any of these institutions. During my formative years as a performer, neither I, nor anybody among the musicians around me, ever gave a second thought about their emotional state during daily practicing sessions. Being disciplined professionals, we practiced when exhausted, sick, frustrated, angry, or offended. We were sometimes in a neutral state, sometimes in a good mood, sometimes inspired or not inspired—indeed, the physical or emotional condition did not matter because the work simply had to get done and our job was to focus on the score, not on ourselves.

Only after my protracted investigations did I come to understand that thoughts and emotions experienced during daily practice create emotional memories later associated with this repertoire. These memories, engraved on the subconscious level, can resurface not only at the time of a performance but many years later as well, automatically and uncontrollably triggered by almost any incidental connection.

Science has helped me understand why it is so difficult to work on some pieces and even harder to play them on stage. Now I have come to understand how past experiences—such as mine with Chopin's Sonata in B-flat Minor, for example, that triggers memories of the deaths of so many people dear to me—accompany me to the stage. My knowledge of this has freed me to begin creating other more positive memories that will eventually displace the traumatic ones.

From the moment any repertoire is chosen, musicians understand that every work contains so-called 'underwater rocks'—places where from the first readings some level of physical or emotional discomfort displays itself. Even after all the technical difficulties are officially overcome and the performer is ostensibly ready to bring the music onto the stage, these places nonetheless do not allow any psychological rest. If the performer belongs to a high anxiety group, these uncomfortable zones can make even an experienced and apparently confident performer both nervous and vulnerable.

The program I will perform for my final DMA recital can serve as a representative example of how fresh insights might provide a performer with both greater awareness of his

emotional vulnerabilities as well as providing tools to neutralize the most disruptive ones. My program of Schubert, Chopin, and Kevork Andonian evokes all of the elements that I have already mentioned: traumatic emotional content from the past, the absence of direct emotional reminders from the past, emotional content developed during the preparation stage, and "mysteriously" uncomfortable places within each piece. Any performer can take the tools that I will describe and apply them to their own repertoire.

To begin with, some of the movements in my program present technical challenges that can easily trigger anxiety. In my particular case it is exacerbated by the fibromyalgia from which I currently suffer. This is true even during the preparation stage, since any muscle response is by itself painful: the pain resonates in other groups of muscles, and both of these interfere with concentration and memory. As I discussed in Chapter 2, physical factors alone can account for a high level of anxiety lasting through an entire program.

My program consists of:

• *Gratitude*, a 6-minute work by UCLA graduate student composer Kevork Andonian (2011)

Franz Schubert: Sonata in A Major, Op. post 120, D. 664 (1819)

I. Allegro Moderato

II. Andante

III. Allegro

Franz Schubert: Fantasy in F Minor, Op. 103, D. 940 for Piano Four Hands (1828) with Maria Demina, secondo

I. Allegro molto moderato

II. Largo

III. Allegro vivace

INTERMISSION

• Frederic Chopin: Piano Sonata No. 2 in B-flat Minor, Op. 35 (1839)

IV. Grave – Doppio movimento

V. Scherzo

VI. Marche funebré

VII. Presto

Each of these works holds ample stores of "underwater rocks." Working through representative examples of these 'rocks' will fill out the relationship between trauma-driven anxiety and its relationship to seemingly practical performance issues. Awareness of how to approach and deal with "hidden rocks'" *before* going on stage is the surest way to mitigate the effect of deeply buried traumas in live performance.

Kevork Andonian: *Gratitude*

Even though this piece is not as technically challenging as others in my repertoire, its very simplicity poses a challenge that can easily elevate any anxiety level. To begin with, its tempo direction, "Largo cantabile," already sparks anxiety. Over my two decades of performing I have noticed repeatedly that playing slow music often presents a bigger challenge than performing virtuoso pieces. A slow tempo demands absolute concentration, the ability to focus on each note and its relationship to the preceding and subsequent notes. It demands the ability to pre-hear every sound and the ability to execute exactly what one has heard in advance.

This ability is directly affected by our sense of time, which under stress becomes both compressed and distorted. When the heart beats faster than normal, a slow tempo can take on tortuous dimensions. Even a casual listener will notice if the line is erratic or broken, only adding to the stress already felt.

The transparent harmonies of "Gratitude" demand from the performer a rich, expanded sound pallet; the repetitive motives require an almost unlimited imagination in order to give them a new character, intonation, and meaning every time they recur. Anxiety interferes with

breathing, rendering it short and shallow, whereas deep and calm breathing is an absolute must for performing music that unfolds so leisurely.

Anxiety will also affect the muscle control necessary for a warm, beautiful tone. From the very first note of the piece the sound quality plays a crucial role in determining whether the audience will or will not be engaged. Since the piece is relatively short, the time for extracting and displaying the beauty of the sound, the phrasing, and the harmony is quite limited; stage anxiety can quickly sully the entire piece. Since there is a direct connection between tight contact with the keyboard (possible only in a calm state) and a warm, expressive tone, muscle tremors growing out of stage anxiety can also contribute to a sound quality that is erratic rather than sustained.

Since this is a contemporary piece and I have no negative information in my brain related to this it, the only thing that can trigger uncomfortable feelings on the subconscious level is the general level of stress that I experienced while learning "Gratitude." I am working hard to establish other kinds of emotional connections to the piece that will be my friends while I am performing it onstage.

Franz Schubert: *Sonata in A Major, Op. post 120, D. 664* (1819)

Despite its apparent positive mood and transparent harmonies, this intensely lyrical work includes several elements that could contribute to a high level of anxiety. The presence of themes that return regularly in slightly altered form—for example, the head motive that occurs in m. 1 returns in bars 13, 16,79-80, 83-84, 91-92, 95-96, and 128-129— requires high levels of concentration to keep the distinctions clear.

For me this sonata includes indirect but vivid associations with trauma. At an international piano competition a brilliant performer who had already played much more demanding pieces in a previous round, forgot the very first modulation at the beginning, started

over three times, was laughed at, and ultimately left the stage in disgrace. As an audience member I was completely perplexed as to what could cause such misfortune.

The second movement requires total concentration to create an exquisite and nuanced sense of flow. I have in mind particularly the chorale-style opening (mm. 1-14) that recurs at mm. 33-42 and again at mm. 50-59; attempting to play these with an elevated pulse will prove quite disorienting.

The third movement—at times ingratiating and at other times turbulent—teems with uncomfortable passages. One example is the closing areas in both the exposition and recapitulation (mm. 53-67 and 105-119) that in the right hand requires swift movement of the wrist while pivoting around the thumb and large octave leaps in the left hand. Unusual modulations, such as that in mm. 74-77, can also challenge memory under pressure. Unless an emotional meaning is attached to every single phrase, stage anxiety can and will undermine concentration.

Franz Schubert: *Fantasy in F Minor, Op. 103, D. 940 For Piano Four Hands* (1828)

Schubert's masterful late Fantasy does not present to me direct traumatic memory associations, and the fact that the performers are permitted to use music score result presupposes a better psychological condition and a more confident performance. However, not so fast! The challenge of maintaining the transparent melody (mm. 2-23) requires relaxed hands and efficient hand and finger coordination (cf. mm. 83-90) since the secondo player is often playing in the same octave. It is essential to maintain a clear "conversation" between the players (cf. mm. 482-512), and if they do not see eye to eye on the many dotted rhythms (cf. mm. 133-163 in the Largo), a great deal of anxiety will result.

Anxiety levels in this piece might also be relaxed or exacerbated depending on the *secondo* player's own emotional and psychological state. Personal habits such as over-depressing or under-depressing the keys need to be fully negotiated beforehand, especially if

these are different for each performer, which would only result in dynamic imbalances. Although bound together by Schubert into a single long cyclic span, the two performers must make fresh phrase starts together a considerable number of times. For a piece this intimate and this expressive both performers need to share the same ideal of its near-mystical world.

Frederic Chopin: Piano Sonata No. 2 in B-flat Minor, Op. 35 (1839)

The most difficult piece from a psychological perspective for me on my program is the Chopin Sonata No. 2 in B-flat Minor. I first heard its third movement at eight years old while attending the funeral of my girl friend, who was my same age. Since then I have heard this movement no fewer than twenty-two more times under similar circumstances.

The "doomed" hypnotic chords at the beginning of the movement always created a state of torpor within me. The repetitive motive used throughout the 30 measures of the A-Section mirrored the repetitive thoughts in my mind: "Why? Is it really over? Life is so short…" The two desperate waves of ascending chords in mm. 15-18 and 23-26 always triggered in my mind some kind of vain protest, a refusal to acknowledge as reality what I was seeing.

The lyrical B-Section in D-flat Major was always played in funerals at the moment when the casket would be lowered into the grave. Being young I felt particularly insulted by the major mode, which certainly did not match my feelings As I grew older and attended funerals more and more frequently I tried in vain to persuade myself that in these moments the music represents the soul, finally free of the pain and burdens of this world.

Elsewhere this Sonata has always been eerily present whenever a tragedy occurred in my life: I heard the first movement on the radio as the mother of a close friend called to inform us that the celebration of her daughter's sixteenth birthday had been cancelled because she had passed away. I was speechless and the only sounds that interrupted the silence were the anxious motives of the first movement over the airwaves; to be precise, it was mm. 25-37—before the modulation to D-flat major.

I was listening to the scherzo second movement when my brother called to inform me of my father's sudden death at age 51; this nightmarish news was in complete dissonance with the *Piu lento* (somewhere between mm. 85-137) that was playing.

I heard the ghostly fourth movement in the home of another friend when I came to discuss with her uncle the process of identifying her body that had been dissected into 68 pieces by a serial killer. I still experience insurmountable horror whenever hearing or playing this movement. There is so much effort required to change the meanings assigned to me for this incalculably traumatic event. Even when detaching the informational part of my memory from the emotional one I still feel the acute physical nausea precipitated in me at that moment: "How does she look now? How will I be able to recognized her by her pieces? Who did this, and why? And with what tools? Did she suffer, and for how long? How will her mom ever survive the loss of her only child?" This restless marathon of traumatic thoughts commences with the first bar of the movement and continues even after it ends 75 bars later.

Why do I choose to play a piece that carries so many tragic associations for me? Because it is the only way I can ever give my demons the burial that they deserve. I will draw on every dimension of connection that I have unearthed in my research to bring about a kind of mind-body unity that for the first time in my life I believe to be an actual possibility.

It is science rather than the self-help books about stage fright that have enlightened me about the power of music and its intimate yet powerful connections between emotions and memory. These and connection between traumatic memories and emotions, between the memorization process and emotions, between music and the triggers of suppressed memories, between emotional and cognitive preparation for performances—these have never been treated even cursorily in the sizable stage-anxiety literature.

Science has also laid out the dangers of prescription medications so commonly and often irresponsibly made available through an informal musicians network rather than a physician, used by performers whose lack of knowledge in the area of stage anxiety has pushed them to

seek a quick fix. There is, alas, no quick fix. Rather, science has suggested approaches never invoked previously by musicians; it has forced me to invent exercises and to test their efficacy. In the Epilogue, I offer the preliminary outlines of a more comprehensive treatment program that would form part of a rigorous semester-long, or quarter-long, course.

Epilogue

Strategies for Coping

Bringing About Emotional Healing

The scope of this present work does not permit the attaching of another entire chapter containing the course syllabus that I have developed in parallel with my research. I believe fervently that every performing art program in higher education should offer a serious course on this critically important topic. I am confident that both the enrollments and the psychological dividends would justify such an institutional investment.

The exercises included below are representative of a larger, more comprehensive approach to treatment. None of them requires a medical degree or even a degree in music. They do require genuine engagement by the person undertaking the exercises. Some exercises dealing with early childhood traumas could be carried out under the guidance of a licensed therapist, but with determination and a positive outlook significant progress can be made on one's own.

The therapeutic roots of the exercises that I have compiled over a period of several years lie in clinical psychology and psychiatry, and include psychodynamic therapy, Cognitive Behavioral Therapy (CBT), and Neuro-Linguistic Programming. Other techniques such as visualization, de-sensitization, and prolonged exposure (for traumas) have been used in clinical settings for some time.

My inadvertent usage of these techniques to address stage anxiety did not arise from an effort to invoke any particular methodology. Rather, I experimented on myself with all the imagination I could muster, gradually discovering what worked and what did not. Hence the representative techniques elaborated below grew entirely out of actual implementations, guided by a heightened sensitivity to emotional triggers.

While a seemingly infinite number of causes underlie stage anxiety, a half dozen representative "exercises" that address different dimensions can invite performers to take

concrete steps toward their own healing. The first few find their outlets in alternative affirmations, while the later ones take the form of more specific exercises. Yet each in its own way addresses the specter behind chronic stage anxiety. Performers with different experiences will select the ones that offer the greatest potential for their own healing.

Exercise 1: Combatting Excessive Perfectionism

Perfectionism is a quality that musicians point to proudly; it motivates them to deliver music's beauty and power at the highest level they can attain. However, an unhealthy degree of perfectionism is rarely if ever invoked in any discussion of stage anxiety.

Perfectionism, when set at a level that is out of the human ability to reach, or when it becomes a form of obsession that leads to physical or psychological self-destruction, the harm can be great and lasting. Schumann's attempts to perfect finger dexterity, fashion models' anorexia, the dramatic increase in diagnoses of body dysmorphic disorder, depression resulting from an inability to reach a desired goal—these are only a few of many examples.

The boundaries between healthy ambition and perfectionist disorder are not always clear to musicians, but could be recognized with some behavioral patterns and after deeper self-questioning. Oftentimes the signs present themselves already during the preparatory stage when we become disenchanted with practicing and discouraged to search for new things in familiar pieces. We blame it on exhaustion, yet even when well rested we still lack the necessary motivation, creativity, and inspiration.

After investing all possible time and energy into polishing the repertoire it still does not seem to sound good enough. The inability to recognize incremental progress leads to all-or-nothing, black-and-white thinking. Such perception eventually can discourage regular practicing and might worsen performer's emotional condition on stage. In this case, a form of Cognitive Behavioral Therapy can prove liberating.

I suggest starting with an investigation of our emotional reaction to the words "perfect performance" by posing the following questions:

What is you definition of being perfect as a performer? Does it mean to play without any textual mistakes? Does it mean to play without any clinkers? Does it mean not being criticized after a performance? Does it mean being at one with the instrument? What or who is defining "perfect" for you now? What or who was defining "perfect" for you in the past, when you felt motivated to practice and perform? Have you always had the same perception? If not, when did it change? Can music be perfect by itself?

It is very important to determine where these ideas of perfection come from: oppressively opinionated teacher/ parent who never left any room for creativity or were possibly developed in attempt to measure up to perceived jury standards while participating in international competitions.

If practicing and performing have become a burden, it is very likely that the ideas of perfection have outgrown themselves, and that subconscious mind is signalling that something must change. In other words, the mind and body are not simply refusing to practice but are instead insisting that things be different.

Affirmation as An Alternative to Negative Thinking

When I look closely at a flower I notice that its petals are not symmetrical, its color is not even, and its stem is not perfectly straight—yet it is perfect. It is perfect in its authenticity. It does not need to prove its beauty to anyone, nor does it seek to impress or to assume a different color or size.

Music itself parallels nature closely. Since music is a part of creation, the notes that reveal the musical story, first for me and later for my audience, are in one sense the notes they are. Each one is absolutely comfortable with being itself: at every particular moment "G" is not

trying to be any other note, such as the one immediately before or after it. Each note is comfortable with its own place, with its own pitch, with its own length.

Perfection, then, issues from authenticity. The person inside me, the one that preceded the conditioning of my parents and teachers, is always available. The real me, my authentic spirit, is already perfect and has every right to join in the creative flow of music-making. Since my spirit is unique I can experiment with perfection from the vantage point of my own authenticity, simply being curious rather than harshly self-judgmental about how it sounds.

Exercise 2: Overcoming a Distorted Sense of Responsibility

When going onto the stage, musicians—regardless of the instrument they play—feel a tremendous sense of responsibility to perform their repertoire with the highest possible level of precision—which only feeds anxiety. We feel a responsibility to play the music exactly as the composer's notation directs us. This encompasses phrasing, articulation, dynamic, tempo indications—everything we see reflected in the score.

This sense of responsibility begins with a search for the most accurate edition, continues with listening to different recordings, reading about conventions of playing music of that time, and learning about the differences between our instruments and those for which our repertoire was written. Then, of course, follows hours of practice.

The additional responsibility of pleasing the audience grows in proportion to how much we are being paid, and how much each attendee has paid for their ticket. Somehow we owe them a deeply satisfying experience—even if every listener probably has a different definition of what "satisfying" is.

During preparation, this sense of responsibility only continues to grow, sometimes leaving a very small space for our own ideas. This imperative of responsibility is introduced by our very first teachers, who explain to us just how amazingly talented the composer of our piece

was, and for how many years or centuries this music has been played and recorded by the greatest artists.

At some point this burden of responsibility stands firmly in the way of self-expression. I suggest below an affirmation that can decrease this corrosive pressure.

Affirmation as Alternative to Habitual Sense of Responsibility

Responsibility is not honest and it is not on me. It is not incumbent on me to satisfy an audience. I am not responsible for a specified degree of joy in my listener or even for playing correct notes. Creativity will happen somewhere every second, whether I participate in it or not. When I come in, I become an instrument of the instrument that I play.

The only thing for which I am responsible is to be available, whether I am practicing or performing. Being available, I become connected, passionate, and remember everything, because inspiration and clear state of mind are the domains of creativity. My talent, mind, and spirit cannot be compromised by anything. My pain, my memories, and my previous stage experiences have contributed a lot of positive things to my art. My pain has taught me to feel more deeply. My memories have brought me closer to music; my stage experiences have helped me to know myself better. That is why I can make myself available.

It is my choice to replace all-encompassing responsibility with permission to become available. I now allow myself to enjoy the music I make. I am no longer responsible for the perfect outcome of any performance. I am free from the onerous responsibility of remembering notes. I am free from being responsible for the impression I leave on others. I am free from being responsible for their satisfaction with my performance. I am free …

Exercise 3: Conquering Fear of the Unknown

Fear usually has the most paralyzing effect on those individuals who cannot find anything positive in it. The only coping mechanism of which they are aware is suppression or meticulously avoiding situations associated with the fear.

By fear I mean a general fear of the unknown, not necessarily the negative outcome of that fear. Hence fear has positive functions as well. It protects us from danger, from possible physical injuries, sickness, addictions, and psychological traumas. So instead of avoiding fear I suggest meeting it head on with the following exercise:

Close your eyes while sitting in a quiet place. Imagine that you are getting ready to meet with your fear. You do not know what it looks like. You only know the address. You get into your car and start driving. The weather is cold and overcast. You drive through streets filled with abandoned houses. Suddenly you feel uncomfortable and almost make the decision to turn around and go back home.

Yet you continue driving, understanding that this meeting will clarify your relationship. You arrive. You get out of the car and walk toward a gray, unfriendly house. It is cold and getting dark. There are no lights on in the house. You are about to ring the bell when you discover that the door is open. You enter the house. Inside a dark hallway you see someone sitting in an armchair with his/her back toward you. You stop and say: “Hello, I am here to meet with you.” The person, whose face you still do not see, asks in a neutral tone: “What do you want?”

You answer: ” I came to thank you. I am very grateful to you for keeping me safe and alive, for protecting me. Please forgive me for not understanding it before and for hating you. I also forgive you. I forgive you for the uncomfortable feelings you gave me, for making me feel small and helpless, for appearing without an invitation.”

The person rises from his/her chair. He is tall, with wide shoulders and a broad back. He turns and starts moving towards you. You do not know his intentions but you do not feel

nervous. He comes close and you discover that his face is not ugly. You continue the conversation:

You: "I want to invite you to my concert."

The Person: "I am attending each of your concerts anyhow."

You: "Yes, of course, but from now on I will always have a ticket for you. You are welcome to sit in the second row, watch and listen to me, make sure nothing dangerous will happen to me, but you are not allowed to go on stage. I am inviting you and I will be very happy to see you, because I know you are protecting me. You are allowed to attend but not to run the show."

The person smiles, gives you a hug and you see sun coming through the window behind you. He says: "Thank you for coming and for inviting me. I just wanted you to notice me. Now when you did, I did not harm you. I promise to watch and protect you. I forgive you for ignoring me and for hating me"

You leave the house and notice that the sky is blue, the sun is shining and you have a very light feeling inside. You are happy and free.

Exercise 4: At the Instrument

Musicians may experience some level of frustration with technical difficulties encountered when learning new repertoire. The overall emotional state is very important at this stage and I believe these challenges can be overcome while maintaining a healthy attitude and positive emotions. I suggest the following mental exercises that can be engaged simultaneously with challenging places in the score.

Select any difficult passage in a composition. Then formulate the causes for the difficulty. Some possibilities are:

1. It is physically awkward to play. (I cannot find the optimum hand- position, I cannot get the right sound, etc.)

2. The harmonies are very complex (they change frequently,

the chords contain hidden melodic lines, etc.)

3. The general harmonies remain largely the same, but they

appear in constantly shifting inversions.

4. The passage is so irregular that it resists memorization

5. The passage triggers unpleasant emotions, though not clearly associated with any particular event.

6. The piece triggers sad feelings associated with particular events that floods the mind instantly.

After defining the problem, play a manageable portion of the daunting passage and repeat mentally: “What an interesting part; it will definitely teach me a lot. How wonderful that there is something to discover.” With these thoughts, begin to play the chosen segment, synchronizing your breathing with the movement of your hands (on the right: breathe in; on the left: breathe out; wrist motion upward: inhale; wrist motion downward: exhale).

If this is not immediately comfortable, try distributing the inhaling and exhaling over a number of notes, so that your breathing will be even, deep, and rhythmic. If, at any point, your practice takes on a level of disappointment or frustration, say to yourself aloud: “I like the fact the music encourages me to find new approaches and think creatively. I love a challenge, I know a lot and will invent new strategies that will make me understand this part/passage and feel comfortable playing it.”

It is crucial to keep track of one’s thoughts as they arise in the process of overcoming these difficulties, and to keep equal track of one’s emotional responses. If it is a rhythmically difficult passage that resists after variety of creative approaches and starts to discourage, then do your best to re-direct your mind from the negative emotions and try to come up with humorous or positive words/syllables to coincide with the turns of phrase; it will be best if they can assume the shape of a sentence.

In cases where the piece or a portion thereof comes with emotional baggage, it is important to first allow these feelings to be present. You can say to yourself: “I have power to imbues this music with a new meaning. I know this new meaning will require time before it is branded indelibly on my subconscious level. However, I understand that this music was initially written not to illustrate my original traumatic event. This happened inadvertently, and I can assign a different meaning to this music. I will do my best to imagine what it may have meant to the composer who lived and wrote this long before the traumatic event in my life, with which this music have been associated. I decide to create at least four different positive scenarios.

You can come up with combinations of words, phrases, and sentences about your decision until your mind begins to allow you to imagine something different. You must synchronize the words, pronounce them aloud while playing the passage, and synchronize your breathing. We often stop breathing during physical exertion or discomfort, which in itself brings on a quickened heartbeat from insufficient oxygen and can by itself trigger feelings of anxiety.

If the piece is charged with traumatic memory, your breathing will also change. You need to constantly “scan” your body for signs of tension. Musicians with broad performing experience are used to controlling the basic muscles of the back, hands, and feet, but they frequently experience difficulties in controlling and relaxing muscles that are not directly involved in the process of performing (such as the soles of the feet and toes, the neck, the facial muscles, and jaw). These seemingly small things are very important since any tensing of the muscles will be reflected in a flat, stifled sound.

For pieces that trigger uncomfortable emotions without information, you can say to yourself: “I am ready to remember what happened. Even if this was a horrifying event, suppressed by my subconscious mind to protect me, I now choose knowledge. I know that once I own all parts of this memory I will feel more powerful and confident. I agree to experience any fear or unpleasant emotions during this recall because I am in charge and can decide when to stop. Everything bad has already happened to me. Remembering exactly what happened will not

make it worse, only better." It will take practicing such pieces or parts of it on separate occasions until the memory will come sharply back into focus. The key phrases are: "I have the power to decide," "I am choosing," "I am in charge."

Exercise 5: "Wishes"

Along with emotions, we often suppress desires and wishes, due to a conditioned belief that at some point it will harm someone or us directly. Hence, we "must" only wish for good things; bad things must be eliminated entirely from our mind. This, of course, restricts our access to ourselves and leads to real levels of dissatisfaction in life. We become inured to lots of things even though we do not anymore wish for them. We are afraid that if we say to ourselves clearly that we no longer wish for what we used to, it will turn our world upside down and we will lose our sense of identity. We are afraid to acknowledge "bad" wishes because it can make us feel badly about ourselves.

To address this dissonance, begin by writing down (by hand, not on a computer) a list of your most important wishes without evaluations or judgments attached to them. First you might jot down wishes worthy of respect and approval—this will prove straightforward enough. But then move on to hidden wishes of the kind lying in wait in your subconscious. The aim of this exercise is to allow yourself to experience *all* of your wishes, even the gloomiest and most sordid. By allowing yourself to wish everything without judgments attached to them, you will remove energy blocks that have been created as suppression mechanisms for wishes deemed undesirable. As soon as all these blocks have been removed, the power of the harmful wishes over you will begin to diminish.

Try to come up with as many as ten hidden wishes. Immediately after writing them, you will probably feel disturbed and you will not wish to continue the exercise. That is normal. Exhale deeply and continue to search at the subconscious level for those wishes that you have

painstakingly suppressed. Write them down one by one. When the list is completed, before each wish write: "I allow myself to retain this wish; no one forces me to do it."

When you have had time to reflect, read your entire list of wishes carefully. Make a note of which ones have existed in your consciousness for a long time, which ones you are stuck on but that are not really yours, which ones you have chronically suppressed, and which ones evoke fear, shame, and self-disgust. Rewrite the list until you are satisfied that you have allowed *all* of your wishes to bubble into your consciousness.

Rewrite your list while breathing deeply. Each time that you rewrite your list, be delighted with the fact that you are coming to know yourself better and better, that you are becoming freer. If you keep at this exercise, gradually every hidden wish that proved a chronic hindrance to your stage performance will begin to feel less burdensome. Gradually the hold they have had over you will begin to melt away. Someday they will not even be a distant memory.

Exercise 6: Neutralizing Past Traumatic Events

These memories are, of course, among the thorniest and most difficult to address. The previous two exercises can begin to address them, but at some level they may still resist being fully identified.

1. Think of a negative situation and concentrate on the image that represents for you its most traumatic part.
2. Look closely at what you "see" most clearly with your mental gaze: The person who evokes in you such negative thoughts, a voice telling you hurtful and insulting things, etc.
1. Look for phrases that provides you with the most accurate assessment of your feeling in that situation:
    1. I am helpless.
    2. I am worthless.
    3. I can't change anything

4. I have no choice but to be patient.
5. I am not worthy .
6. I am small and defenseless.

1. Now imagine that you are in a constant process of physical and spiritual growth, and that all of the self-assessments describing your feelings in these fearful situations are becoming smaller and smaller, looking more and more like toy ornaments. If it is a voice that haunts you, notice how it is becoming more muffled and distant. If it is a person whose opinion of you is very important, observe mentally how his views are becoming smaller. If it is a place where you have suffered, note how all its previously bright and lurid colors have begun to fade.
2. Now imagine that you are sitting at a table at home where it is quiet and calm. In front of you is a doll house with a large number of windows, doors, rooms, and people.

- Return to your negative situation, assign to it to one of the rooms in the dollhouse, open a little wooden window and once again look over the situation from beginning to end.

At this point you will begin to see that you are no longer a participant, even if you see and recognize yourself. You are observing what is happening from the outside while perhaps slowly drinking tea or coffee and savoring the peace and quiet. The drama unfolding before your eyes is a game featuring small toys. If you do not like hiow it is developing you can, at any time, remove one or more of the participants from the dollhouse room. You realize that you have absolute control and power over what is taking place; you feel genuine peace of mind. You remember how

the original situation ended and, if you do not like that ending, you create a new one, in which everything resolves the way you wish it to.

Now you decide to close the little house, to smile and to take it off the table. It was an engrossing game, but now it is time to get down to work. You are in an excellent, upbeat mood. You chose to play for awhile, but now it is time to do more important things—such as tackling that passage that created your unease in the first place.

With some imagination it is possible to create of whole range of physical and mental exercises of which the three elaborated above are only representative. To succeed you need only to persist and to be committed to the truth, whatever unpleasant or frightful connotations that this may carry initially. If you refuse to any longer be intimidated, then time and truth are truly on your side.

After you adopt these exercises you will hopefully begin to discover that you now have the freedom to choose, including the choice not to bring any experiences at all onto the stage, only your love of music that taps into your natural flow of creativity.

I also believe that with the benefit of science this approach to stage anxiety can foster awareness in musicians, actors, public speakers, and performers of all kinds. Eventually their collective experiences will provide a rich database for research on the subject, enabling more and more talented performers who have been chronically bedeviled by severe stage anxiety to now shine brightly and serve as a beacon of hope to others.

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Part 1: Self-Help Literature on (Stage) Anxiety

Although each of these volumes approaches stage anxiety from a different angle, what they all have in common is that none deals with past experiences—whether musical or otherwise—at either a diagnostic or therapeutic level. For many sufferers from mild to moderate stage anxiety there is something to be gained from almost every one of these sixteen self-help books. But for chronic sufferers of stage anxiety there is little help here.

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Part 2: Scientific and Medical Literature on (Stage) Anxiety

Beginning in the mid-1960s and accelerating over the last two decades, scientific and medical research on the root causes and possible treatments for anxiety has finally reached a critical mass. While only a small percentage engaged directly with stage anxiety, the basic research carried out especially over the last three decades has made it possible to piece together a plausible model for the manner in which stage anxiety manifests itself in the body (the focus of Chapter 4). In the interests of completeness I include a number of articles that I consulted but did not cite directly in my study.

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