Chapter One

The Basic Parameters: Emotions and Music

> For the virtuoso, musical works are in fact nothing but tragic and moving materializations of his emotions: he is called upon to make them speak, weep, sing and sigh, to re-create them in accordance with his own consciousness. In this way he, like the composer, is a creator, for he must have within himself those passions that he wishes to bring so intensely to life. You see, playing the piano is a combination of Brain, Heart and Means. And all three should be even. If one falls short of the others, the music suffers. Without Brains, you are a fiasco. Without Means, you are an amateur. Without Heart, you are a machine. It has its dangers, this occupation...
>
> Vladimir Horowitz[1]

1.0 Prologue

Emotion, structure and technique (or, as Horowitz refers to them, heart, brains and means), are the essential foundations on which a solid and satisfying performance stands. Though these three foundations stem from different domains, each is nevertheless of equal importance with the others, and offers the performer a different and much needed perspective on a piece of music. In reality though, very few performers construct their performances by relying on all three foundations. Some performers naturally connect to their perceptions of the emotions in music; others find themselves more drawn to the music's structure, and still other performers find it most appealing to concentrate on the

[1] This quote is taken from the liner notes to Vladimir Horowitz, *a Reminiscence*, Sony B00005M0LL.

technical aspects of performance.[2] If the performer's goal is to achieve a performance in which both emotional content and musical structure are present, s/he must be willing to explore both in the piece s/he is performing.[3] This exploration should yield a set of structural and emotional decisions: her interpretation of the piece. If executed correctly, these sets of decisions will merge through the performer's playing of her instrument, through technique.

As was stated previously, while each of the three foundations is strongly tied to the others, each nevertheless stems from a different domain, obeys a different set of principles, and should therefore be explored independently. To this, one should add that while there are many methods that can assist the performer in deciphering musical structure and ones that can help improve her technical control, there are almost none that deal directly with the issue of emotions in performance. The focus then of this document will be to present a method by which the performer can explore this issue of emotions in music.

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[2] Working with music students in Israel, America and China, my colleague, Dr. Einat Fabrikant and I reached the conclusion that most of our students were primarily concerned with technique, very few with musical structure and most never consciously thought about the relationships between emotions and music.

[3] In this document, s/he refers to both genders. In order to make the reading of this document more comfortable possessives were kept in the feminine.

1.1 What Are Emotions?

Defining Emotions

Defining what emotions are is a difficult task and in fact, it has occupied the minds of great philosophers and scientists for centuries. If one were to define 'fear' for example, would one be discussing one's racing thoughts or one's racing heart? Which of the two is fear or could it perhaps be both? The definition of emotion used here will include both: The Physical Aspect – the body's response to stimuli; and The Cognitive Aspect – the thought process which accompanies the physical manifestation of emotion.

Since in the past it has been customary to give precedence to one aspect over the other, it is absolutely crucial to realize here that the physical manifestation of an emotion and the cognitive process associated with it are two different and necessary components of any emotion. The *Oxford English Dictionary*[4], defines emotion as: "Any agitation or disturbance of mind, feeling, passion, any vehement or excited mental state," and in a separate definition: "A moving, stirring, agitation, perturbation (in physical sense)." This division of definition separates the physical and the cognitive aspects of emotion from one another. Dr. Daniel Goleman, on the other hand, in his book *Emotional Intelligence*,

[4] The following definitions are taken from the Oxford English Dictionary Online, Second Edition 1989, 20 February 2007.
<http://0dictionary.oed.com.library.juilliard.edu/cgi/entry/50074104?single=1&query_type=word&queryword=emotion&first=1&max_to_show=10>

insists that we must: "Refer to a feeling and its distinctive thought, psychological and biological states and range of propensities to act."[5]

Looking back, the origin of the word emotion can be found in the Latin verb *motere*, 'to move', with the addition of the prefix "e" which alters the meaning to 'to move away', indicating that emotions really mean actions. "All emotions are, in essence, impulses to act, the instant plans for handling life that evolution has instilled in us."[6] To complicate matters further, in trying to define emotions one has to confront the tendency to use a set of synonyms such as "feelings", "moods" or "intuition". While these terms do share some fundamental similarities with emotions, they should not be used interchangeably.[7]

Another common misconception is the notion that emotions are inherently subjective and that one cannot presume to understand what another person is feeling.

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[5] Daniel Goleman. *Emotional Intelligence - Why it Can Matter More Then IQ* (New York: Bantam, 1997), 289. The underlining is mine.

[6] Ibid., 6.

[7] For example, some people say that their intuition has propelled them to act in a certain way: "I'm following my gut" they claim. But then what do they mean by using the term 'intuition'? It is in part an alternative way of saying that they are going to follow their unexplored and subconscious emotions and not their logic and reason. Understanding that intuition is essentially an emotional response without a name is crucial to understanding how much effort we have put into camouflaging our emotional responses, and as a result our understanding and definition of them. The word 'mood', is another good example. Goleman explains that an emotion is an intense occurrence of a specific state, while a mood, which is still an occurrence of an emotion, is nevertheless one that happens to a much lesser degree of intensity and can be experienced for longer stretches of time. The distinction between emotion and mood, becomes critical as one explores the question of music and the emotions, since there the nature and the intensity of the experienced emotion is at the center of the debate. Leonard B. Meyer in his famous book *Emotion and Meaning in Music*, quotes Weld: "The emotion is temporary and evanescent; the mood is relatively permanent and stable." He adds that: "As a matter of fact, most of the supposed studies of emotion in music are actually concerned with mood and association." Leonard B. Meyer, *Emotion and Meaning in Music* (Chicago: The University of Chicago Press, 1956), 7.

While each of us experiences emotion uniquely and according to her own experience (each possessing different associations and intensity levels for different emotions), the very basic physical manifestations of emotions are nevertheless universal.[8] Support to this claim can be found in the research done by Paul Ekman of the University of California, USCF. Eckman has investigated facial expression for four emotions: fear, anger, sadness and enjoyment, and concluded that these faces and their respective emotional connotations are recognized by people around the world.[9] Different research done by Manfred Clynes supports Eckman's findings.[10] This research leads one to surmise that though one will never have an identical emotional response to that of another human being, one can nevertheless universally identify what emotion another is experiencing and therefore, empathize with her.[11]

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[8] The issue of the universality of emotions will be dealt with throughout this document. It is important to raise this issue here, because composers, performers and audience members come from different and at times 'opposing' cultures. The way in which they perceives emotions, and whether that perception is universal or is confined by cultural boundaries is of vital importance to this discussion.

[9] Paul Eckman, *Emotions Revealed: Recognizing Faces and Feelings to Improve Communication and Emotional Life* (New York: Times Books, Henry Holt and Company, 2003).

[10] Manfred Clynes, *Sentics: The Touch of Emotions* (New York: Anchor Press, 1978). Dr. Clynes measured human emotional response using a device called the Sentograph. This device was essentially a button the participants had to depress as they heard words such as 'hate' or 'love'. The Sentograph measured the length and intensity of the press for each participant. The results were what Dr. Clynes refers to as Essentic Forms: graphs representing emotions and these essentic forms have shown that people regardless of their culture and background perceive certain emotions in a similar way.

[11] Steven Mithen concurs with Eckman's and Clynes' position: "It was once thought that all emotions are culturally constructed and hence specific to each particular society. This view has now been surpassed by the recognition that some emotions are universal to all members of our species. Such emotions have been wired into the human genome by our evolutionary history, and that in itself suggests that they are more than mere mental frippery… The precise number and definition of the universal or 'basic' emotions vary according to which academic authority is consulted, but they are always variants of happiness, sadness, anger, fear and disgust. No matter which human culture one visits, these emotions will be found, along with the common facial and bodily expressions that accompany them. One must assume that such emotions and expressions would also be found if one could visit those cultures of prehistoric *Homo sapiens* that no longer exist. Indeed, we can be confident that such emotions existed among all of our ancestors and relatives back to at least 6 millions years ago, because they are also possessed by the modern great apes."

How Emotions Work

Since the times of the Neanderthals, emotions have been responsible for evolution and survival; emotions such as fear of starvation, courage to fight predators and the desire to reproduce have ensured humanity's existence. This essential programming for human existence is preserved in the brain stem: "From the most primitive root, the brain stem, emerged the emotional centers. Millions of years later in evolution, from these emotional areas evolved the thinking brain or neo-cortex, the great bulb of convoluted tissues that make up the top layers. The fact that the thinking brain grew from the emotional brain reveals much about the relationship of thought to feeling: there was an emotional brain long before there was a rational one."[12] One can label the process which takes place in the brain stem and the limbic system as the 'motivation' – the triggering of the proper emotion as a response to certain stimuli -- and the neo-cortex as the 'result' – the processing of the information presented by the brain stem and limbic system, which will then decide on the best course of action. The dialogue between these two systems in the brain is therefore of great importance.

Two glands come to the aid of these 'motivation' and 'result' systems. The first, the hippocampus, enables the comprehension of the context in which an event is taking place; for example it helps us to realize that a tiger is held behind bars in the zoo and cannot hurt us, while the second, the amygdala, dictates the emotional response; it tells us

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Steven Mithen, *The Singing Neanderthals: The Origins of Music, Language, Mind and Body* (Cambridge, Massachusetts: Harvard University Press, 2006), 86.

[12] Goleman, 10.

that though it is behind bars, the tiger is dangerous, and fear is the appropriate emotional response. The amygdala is also capable of bypassing the cumbersome process of evaluating data sent from the senses to the neo-cortex. It has the capacity to override the cognitive system by firing neurons straight to the physical action centers in the brain and triggering a physical response. This shortcut is valuable when one has to run for one's life, but could be problematic when one is merely having an argument with a family member. The term Goleman coined for this process is "Emotional hijacking",[13] a state in which the emotions, as the amygdala perceives them, dictate an action without the conscious cognitive process and the evaluation of the neo-cortex. Another noted psychologist, Joseph LeDoux, calls this hijacking, 'precognitive emotion', meaning emotion that is not a result of a conscious processing.[14]

Let us explore further the physical and cognitive aspects of emotion. With anger, for example, blood flows to the hands so that one could fight an opponent. With fear, blood can flow to the legs so that one could flee or, alternatively, the body can freeze in order to camouflage itself. The cognitive process accompanying fear runs along the following lines: "I can run, I can stay and face the consequences, I can fight back…" etc. The stronger and more experienced one is, the more options one has to choose from, and one therefore has better chances of making the right choice. The ability to make these complex choices is a direct result of a larger and more developed neo-cortex than that of our early ancestors. Emotions are the body's compass; they help identify events

[13] Ibid., 12.

[14] Ibid., 24.

as dangerous or joyous, while thoughts, based on one's emotional response, dictate the right course of action. Both emotion and thought are necessary for human survival.[15]

Empathy and Mirror Neurons

The ability to be empathic and/or apathetic, to feel for another or to ignore her emotions, is crucial to maintaining a healthy life as it is crucial for any artistic endeavor. Empathy could otherwise be described as one's ability to connect to others and apathy as one's ability to disconnect from them. As one learns how to empathize and connect, and/or be apathetic and disconnect, one realizes that one has a choice between the two and that this choice is crucial when facing life's tumultuous relationships.[16]

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[15] Steven Mithen's writings support Goleman's: "But why should human and chimpanzees have emotions? The argument I wish to follow is that which has been most fully developed by the psychologists Keith Oatley and Philip Johnson-Laird, although its basic elements are shared by numerous other theories. The starting point is to recognize that any living being constantly has to choose between different courses of action:...Oatley and Johnson-Laird argue that emotions guide action in situations of imperfect knowledge and multiple, conflicting goals – a state that is otherwise known as 'bounded rationality'. Emotions alter our brain states and make available repertoires of actions that have previously been useful in similar circumstances…Our emotions, therefore, are critical to 'rational' thought; without them we should be entirely stymied in our interactions with the physical and social worlds." Mithen, 87.

[16] We would not be able to feel empathy, were it not for our ability to distinguish our own emotions from those of others. In scientific literature this ability is described as: 'Theory of mind'. Mithen: "Just as with modern apes and humans, the facial expressions, body language, actions and vocalizations of early hominids would have communicated feelings and led to appropriate social interactions…being able to express one's emotions vocally would have been essential to social success…One cognitive capability that may have been significantly different from that of the African apes today is the hominids' theory of mind…this is the ability to imagine that the beliefs, desires, intentions and emotional states of another individual might be different from one's own. The relatively large brains of Homo habilis and Homo rudolfensis, when compared with the australopithecines and modern day apes, might reflect an enhanced theory of mind capability. The selective pressure for this leap in understanding would have arisen from living in larger groups and the consequent increase in the complexity of social interactions." Mithen, 128. For more information about the theory of mind see ibid., 212.

The transmission and reception of emotion is done through one's ability to empathize: "For all rapport, the root of caring, stems from emotional attunement, from the capacity for empathy."[17] Edward Titchener, as Goleman explains, sees empathy as stemming, "…from a sort of physical imitation of the distress of another, which then evokes the same feelings in oneself."[18] The first occurrences of empathic behavior can be seen in the behavior of toddlers. Researchers have noted that if one child falls, another child might start crying. S/he can then be seen alternatively kissing her own limbs as though s/he were the one injured, or attempting to console the injured child by mimicking a caring parent.[19] According to the child's consciousness, s/he is still physically and emotionally connected to the world around her, to her mother as well as to the other children. What happens in the outside world happens to her as well. Only in later stages of development will s/he become aware of the separation from the world and her individuality. Empathy is one of the basic tools for human interaction. It is so basic in fact, that the entire basis for art and drama is the assumption that the viewer is capable of empathizing with events taking place on stage, in a make believe reality, and in which s/he is not a real participant: "Empathy requires enough calm and receptivity so that the subtle signals of feeling from another person can be received and mimicked by one's own emotional brain."[20] In order to feel for another, one first has to have a strong sense of self, of one's own emotions and opinions, and in truth must be completely separated from

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[17] Goleman, 96.

[18] Ibid., 98.

[19] Ibid., 98-99.

[20] Ibid.,104.

whomever s/he is empathizing with. Empathy, it should be stressed, is not a complete identification to the point of physically experiencing another's pain but the ability to identify an emotion in another and after the recognition, to echo it.

Only in 1996 did science produce an explanation for empathy. A research group in Parma, led by Dr. Giacomo Rizzolatti, discovered that in monkeys, brain cells started firing neurons when they observed certain actions, such as eating ice cream, in their care takers. These firing neurons are now referred to as Mirror Neurons: "But if the findings surprised most scientists, recent research has left them flabbergasted. Humans, it turns out, have mirror neurons that are far smarter, more flexible and more highly evolved than any of those found in monkeys…The human brain has multiple mirror neuron systems that specialize in carrying out and understanding not just the actions of others but their intentions, the social meaning of their behavior and their emotions…" says Sandra Blakeslee, and goes on to quote Dr. Rizzolatti: "We are exquisitely social creatures…our survival depends on understanding the actions, intentions and emotions of others…mirror neurons allow us to grasp the minds of others not through conceptual reasoning but through direct simulation. By feeling, not by thinking."[21]

Mirror neurons might give a scientific explanation for Aristotle's ancient concept of *catharsis*. It is perhaps not only a philosophical matter but in fact a physiological process; in the words of Dr. Marco Iacoboni, who has been studying mirror neurons at UCLA: "When you see me pull my arm back, as if to throw the ball, you also have in

[21] Sandra Blakeslee, "Cells That Read Minds," *The New York Times*, 10 January 2006.

your brain a copy of what I am doing and it helps you understand my goal. Because of mirror neurons, you can read my intentions…you know what I am going to do next…and if you see me choke up, in emotional distress from striking out at home plate, mirror neurons in your brain simulate my distress. You automatically have empathy for me. You know how I feel because you literally feel what I am feeling…"[22]

1.2 Mind and Heart

So far, we have dealt with the definition of emotions, their physical evolution, the connection between the physical and cognitive aspects of emotion and the role of mirror neurons in creating empathy. We realize that thought and emotion were meant to be working alongside one another. Why is it then that they are so often found in opposition?[23] In order to explain the conflict between mind and heart, or, if you will, between structure and emotion, one can view the relationship between them as a relationship between two separate entities: the Logical Mind (the neo-cortex) and the Emotional Mind (the limbic system and brain stem).[24]

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[22] Blakeslee. For a more substantial explanation of the functioning of Mirror Neurons see: G. Rizzolatti and L. Craighero, "The Mirror-Neuron System." *Annual Review of Neuroscience* 27 (2004):169-192. Also available on line format at: http://cloudbreak.ucsd.edu/~triesch/courses/cogs1/readings/mirrorSystem-AnnRevNeuro-2004.pdf.

[23] Mithen: "Traditionally, the emotions have been thought of as antithesis of human rationality, our most valued cognitive ability. This notion began with Plato in 375 BCE, who argued that our emotions arouse from a lower part of the brain and perverted reason. Charles Darwin furthered this idea in his 1872 book, *The Expression of Emotions in Man and Animals*…for him, emotional expression was a vestige of our animal past, and one now lacking any functional value because emotion has been surpassed by human reason." Mithen, 85.

According to Freud, the Logical Mind uses the specific language of cause and effect, of reasoning and fact. Using it, one asks what things are and will trust only that which can be proven. It is used to analyze and weigh different options, choose the correct judgments, and form mental structures in order to contain what has been understood. The bottom line for the logical mind is: 'what I understand and can prove, is what I believe.' The language that the Emotional Mind uses, on the other hand, is associative, meaning that the emotional mind uses fragments, images and story-telling to process information. Freud refers to the workings of the Emotional Mind as the 'Primary Process': when one object symbolizes another by merely having similar features. The Emotional Mind is therefore much freer in its thinking than its counterpart, the Logical Mind, since any similarity can create a viable link between seemingly unrelated objects, while there is no need for logical explanations and/or the verification of facts.[25] Having lifted the limits of logic, of cause and effect and of reason, one can say that in the Emotional Mind anything goes. Things are not defined by their objective identity but by how they are subjectively perceived, by personal association. The bottom line for the Emotional Mind is that what something reminds one of, is far more important then what it really 'is'.

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[24] The separation created here between the two is for discussion's sake. The process of feeling/thinking/acting is tightly interwoven and at times, it will be impossible to say where one starts and one ends.

[25] Sigmund Freud, *The Interpretation of Dreams.* Translated by Joyce Crick (Oxford : Oxford University Press, 1999), 397-400. Anthony Storr explains that the primary process uses the four following mechanisms: condensation, displacement, symbolization and hallucinatory wish fulfillment. See also Chapter Four in Anothony Storr, *Freud – A Very Short Introduction* (Oxford University Press, 1989).

The reason for the conflict between the logical and the emotional minds is therefore clear: they simply do not speak the same language. While each offers a different set of advantages and is necessary for survival, one unfortunately finds that these two minds are quite often placed in opposition to one another. The question is then to whom one is going to give the reins? Or could one perhaps perceive a state in which both mind and heart are working together and in support of one another?[26]

[26] Some great innovators have mastered this state of cooperation and have proved that achieving it is not an impossible task. These great scientists, artists and politicians have understood that emotion is what gives one the passion and confidence to go into the unknown and to discover an America, a theory of relativity or bring an end to slavery, and they have also understood that a brain is what gives one the ability to break the unknown into manageable parts and draw up a course of action.

1.3 The Challenges of Confronting One's Emotions

> Anyone can become angry – that is easy. But to be angry with the right person, to the right degree, at the right time, for the right purpose, and in the right way – this is not easy.
>
> Aristotle

> Our passions, when well exercised, have wisdom, they guide our thinking, our values, our survival. But they can easily go awry, and do so all too often. As Aristotle saw the problem is not with emotionality but with the appropriateness of emotion and its expression. The question is how can we bring intelligence to our emotions – and civility to our streets and caring to our communal life?
>
> Daniel Goleman[27]

The Challenges

Freud identified the most basic problem in dealing with the emotions: their placement in the subconscious. If an emotion is found troubling and overwhelming, Freud tells us, it will be prevented from reaching consciousness by being locked up in the mind's subconscious. The suppressed emotion does not have to be necessarily a negative emotion, such as anger or depression; it is enough if it merely confronts a strong judgment or social taboo, such as having a strong sexual desire for one's parent (Oedipus

[27] Both these quotes are taken from Goleman, ix.

and Electra complexes). The division Freud made between the conscious and the subconscious minds, explains why so many of us have problems identifying and accessing emotions: the difficulty is simply inherent in the mind's mechanism. With the aid of psychotherapy, Freud managed to enter the subconscious and heal some of his patients' ailments, but he was not able to change the nature of the process itself: when a person finds herself being overwhelmed by a certain emotion or being confronted with an emotion or desire s/he might judge as sinful, the mind's censor jumps into action by locking the emotion and subsequent images in the subconscious, allowing them to be processed mainly through dreams.

What is left in the basement of the subconscious, still directly affects one's day-to-day actions and decisions. One might not be able to identify these emotions, but they still operate as one's basic software, dictating anything from choice of drink to choice of date. To this fact, one should add that emotions are usually expressed in a non-verbal manner: "Just as the mode of the rational mind is words, the mode of the emotions in non-verbal…the emotional truth is in how he says something rather than in what he says."[28] This triple combination of emotions being subconscious, fundamental and non-verbal, make their identification highly problematic. Though the subconscious storing mechanism is designed to protect the mind from being overwhelmed, it is not perfectly designed. On occasion the mechanism can be confronted with an overwhelming emotion, which in turn can cause an 'Emotional Flooding', i.e. being paralyzed by emotion. We all run the risk of being drowned by waves of fear or joy. The more sensitive we are, the

[28] Ibid., 97.

more we are at risk.[29] On the opposite end of the spectrum, one finds that not feeling emotion can be as debilitating. The inability to acknowledge the emotion one is feeling or empathize with others is a state called 'Alexithymia'.[30] People who have been diagnosed as suffering from this state have been reported to lose interest in life and the world outside them. Without the ability to feel, they lose the desire to connect to their environment or accomplish anything.

Assuming one has learned to recognize one's emotions, one faces the next challenge: owning up to one's emotions and learning how to act on them. By accepting our emotions, we learn how to show affection and solidarity. At the same time we learn that the expression of certain emotions can cause the alienation of others, since certain emotions might challenge the conventions and dogmas of the environment.

A different set of problems arises from the inherent tendency of emotions to metamorphose into one another. For example, if one is afraid of having insufficient money for rent, is dreading an important exam, and is also scared that her significant other is about to break up with her, one runs the risk of being overwhelmed by fear. Though suspiciously similar to the effects of flooding, here the issue is the coming together of the different fears, as is the intensity of the emotion experienced. The three different fears, each troubling in its own right, can be individually dealt with and

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[29] More information on the effects of emotion on highly sensitive people can be found in Elaine Aron, *The Highly Sensitive Person* (New York: Broadway Books, 1997). One should not confuse emotional hijacking, acting on behalf of one's emotions without cognitive processing, and emotional flooding, being paralyzed by one's emotions.

[30] Goleman, 51. The term was coined by Dr. Peter Sifeneos, a Harvard psychiatrist, in 1972.

resolved, but if not separated, the combination of all three could be quite harmful. At any given point, the separate unrelated fears could become one, and the separate oil-drops could merge into one oil stain. The difficulty therefore lies in identifying the true nature of what one could perceive to be the experience of one emotion.

The expression of a given emotion poses yet another set of challenges. A contradiction for example can arise between what one might be feeling, and one's ability to express that emotion to others. This might be the case for an individual who has been brought up on the dogma that men should not show emotions and cannot therefore express them either verbally or physically.[31] Once one has become aware of one's emotions in relationship to others and has learned how to synchronize one's feelings with their expression, one faces the Aristotelian challenge of expressing emotions in a way that could be understood and accepted by others. It is not enough to feel anger towards a friend who has done us wrong; it is essential that we will be able to communicate this anger in a way that the friend will be able to comprehend. This challenge can clearly be seen in the actor's daily work, which consists, among other things, of learning how to control emotions on stage. Actors are encouraged to go 'to that place' where they can connect with their anger, fear, or desire at will. Their challenge is to find just how much of the emotion they need in order to convey the text successfully to their audience. They

[31] We all learn by first imitating our elders. We learn how to walk and talk by observing the behavior of those around us. The expression of emotion works along these same lines. We will learn how to express the emotions by using examples we encounter in our environment. The opposite holds true as well – if we did not see the expression of emotion, had no role model to follow and were growing up in a society that has placed a judgment on the expression of emotion, then there is little chance we will know how to express emotions as adults. The reader should compare this psychological approach with the neuro-physiological approach, i.e. learning via use of mirror neurons.

learn how much is too much or too little and how to distinguish between the two.[32] Unfortunately, in real life, it is very rare that one gets a chance to re-play one's fights and love scenes. What was said and done either conveyed the emotional message or it did not, making the importance of conquering this challenge even greater.

The reception of a given emotion, in turn, is a problem in itself, since one can only respond to the expression of an emotion on the basis of one's own experience. If one does not share the culture, age group, or even sex, of the person communicating the emotion, one runs the risk of misinterpreting the emotional intention altogether.[33]

If the host of emotions included only the positive ones, such as happiness and love, one would probably have no problem with identifying and experiencing emotions. It is the existence of negative emotions that complicates matters. One is very rarely taught how to use negative emotions to one's advantage or to even acknowledge that these emotions are crucial to one's existence. Fear, worry, sadness, panic, rage, depression, disgust are for the most part considered rejected emotions. One must therefore first realize that these emotions are essential for one's survival. They teach one how to avoid a speeding car, a spoiled food, or to confront an injustice. Let us examine

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[32] This is of course true for musicians as well, and this issue will be dealt in more length in Chapter 4 of this document. See also Constantine Stanislavski, *Creating a Role* (New York: Theatre Arts Books, 1965), 44 and Boris Berman, *Notes From The Pianist's Bench* (New Haven: Yale University Press, 2000), 169-179.

[33] Take for example the issue of hospitality in different cultures. An English person traveling from England to Israel might find the warmth of Israeli hospitality somewhat overbearing, while the Israeli person traveling to England, might find the English insistence on proper manners cold and condescending. One of the ultimate examples of this discrepancy between intention and comprehension can be found in: John Gray, *Man are from Mars, Women are from Venus – The Classic Guide To Understanding The Opposite Sex* (New York: Harper Collins, 2004).

this issue in art. Could we imagine any piece of literature or music without the negative emotions? What would the story of Romeo and Juliet be without tragedy? How would the Montagues and Capulets realize the value of human life and make peace with one another without suffering the horrible loss? What would Liszt's music be without a Mephisto or a Dante's Inferno? Negative emotions produce an important contrast that teaches us the difference between good and evil, between two different sets of actions.

Reviewing the list of challenges and problems caused by human emotions, makes it no surprise that their education has been left largely unattended. There are unfortunately not enough people who dare face these difficult challenges and help others identify, contain and use emotions.

1.4 Society's Challenge

> If man is ever to fulfill the mission he undertook at the very start – when he first began to philosophize, as a Greek, and evolved the slogan 'Know thyself' – he will have to understand his unconscious self; and the most articulate language of the unconscious is music.
>
> Deryck Cooke[34]

The Challenge

We have defined emotions as both physical and cognitive phenomena, explored the relationship between thought and emotion, and addressed some of the important challenges that emotions raise. This information will serve as the basis for the discussion in the following chapters. Before we continue though, it is important to examine the performer's challenge in light of a greater challenge, that of society. Performers do not exist in a vacuum; they are an integral part of society and share the same ideals and the same issues. To understand the magnitude of the challenge a musician faces in bringing both mind and heart into performance, one has to understand that the musician's challenge does not exist in isolation and that in fact it mirrors the challenge our society is facing.[35] Society tries to fix the problems of emotional retardation by over-medicating,

[34] Deryck Cooke, *The Language of Music* (New York: Oxford University Press, 1959), x.

cheap TV psychology and generally denying that there is a problem. But this produces dire consequences. In Goleman's words: "At present we leave the emotional education of our children to chance, with ever more distressing results…Our schools and our culture are fixated on academic abilities, ignoring emotional intelligence, a set of traits – some might call it character – that also matter immensely for our personal destiny."[36] One must not forget that performers are also students at these schools.

Modern society has understood the changes that need to take place. It has started shifting from an either/or approach to one that accepts the word and: from an I.Q. only to an E.Q. also world. This being said, it is still unnerving that we have yet to find a way to create such a shift in consciousness in the education system, in schools as well as in conservatories, by introducing a new set of priorities.[37] To be able to take a field such as children's education and change the judgments placed on it, such as 'emotion is not as important to one's education as memorizing information and learning logic are', takes a commitment society still lacks. What would school kids, who have emotional intelligence as a part of their curriculum, be like as adults? And what kind of artists would these children be?[38]

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[35] This section might seem to be a digression from the main subject. Nevertheless, it is my belief that in order to properly understand the challenges the performer is facing, one has to consider a wider arena, that of society at large.

[36] Goleman, 8, 36.

[37] The level of school violence apparently has not reached that critical point when one realizes that teaching emotional intelligence is as important as teaching math. One's awareness of one's emotions together with a mastery of the cognitive processes that accompanies them should be taught as well.

[38] A basic survey of education sites such as The Center for The Prevention of School Violence, Safe School Model and The New York Board of Education on the world wide web, shows that the term EQ has reached public awareness, but as far as concrete actions to nationally implement it in schools are concerned very few measures have been taken.

Possible Solution

One possible solution lies in increasing our Emotional Intelligence as early as possible. Then we will able to create better relationships at work, at school and with those close to us. Goleman describes what Emotional Intelligence means in a few simple phrases: [39]

1. Emotional awareness – knowing what one is feeling at a given moment.
2. Managing the emotions.
3. Being able to motivate oneself.
4. Being able to recognize emotion in others, and being able to empathize.
5. Managing relationships.[40]

The same problems encountered in the macrocosm of the general education system exist also in the microcosm of the music education system. The same archaic judgments rule both systems and neither allows for much change. Emotional Intelligence is needed equally by both the music world and humanity at large.[41]

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[39] This definition in fact belongs to Peter Salovey, a Yale psychologist, and an important figure in the creation of Emotional Intelligence. Salovey took one of Howard Gardner's multiple intelligences: the personal intelligence, and broke it to these five groups to create what we call today E.I. I'm using Goleman's wording. Goleman, 42-43.

[40] Some pioneer work has been done in schools such as The Nueva School in California, established in 1967 by Karen Stone McCown, where the curriculum of the school is based on the basic principles of E.I. In their work the teachers and students of The Nueva School have demonstrated that the tools of Emotional Intelligence do not have to be the possession of a select few, but something every one of us can have under his belt. For more information see: Goleman, 268-270 and www.nuevaschool.org.

1.5 The Origins of Music

> If music is about anything, it is about expressing and inducing emotion.
>
> Steven Mithen[42]

It is time we took a closer look at the other subject this document concerns: music. This section aims to shed some light on how music evolved from the early-human communication system into what we consider to be music today. In order to do so, we will have to first examine the development of spoken language.

If one follows some of the discussions on this issue,[43] one learns that the comparison between music and language is a fairly common one, yet usually done with much caution. For example, most writers stress the essential differences between the expression of emotions via language, where the specific meanings of words carries with them an emotional response, and via music, in which no specific and predetermined meaning for notes exists and therefore no specific emotional response can be guaranteed. Resorting to language in order to find the origin of music, or more to the point, to explain

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[41] "The conservatory's emphasis is on one overriding subject: How to survive and succeed at an audition. Much time is devoted to teaching a student to stress the tried and true and to value unchanging metrical lines above expressiveness and rubato. The best performer is the one who can play a cliché in the most reliable manner…this is now so entrenched in the nation's top schools that many of the soloists below the age of 35 I hear in concert are guilty of plodding and ciphering; they trudge the music unscathed but without communicating its substantive meaning." From Fred Kirshnit, "The Problem with Conservatories" *The New York Sun*, 12 September 2005.

[42] Mithen, 2.

[43] These discussions will be elaborated on in Chapter 2.

how music arouses emotion, would be considered therefore by many a dangerous trap. This would be true if one had not become familiar with Steven Mithen's research as it appears in his book *The Singing Neanderthals*.[44] Mithen demonstrates that in uncovering the origins of human language one is bound to encounter music as well, and that contrary to the approach which completely separates music and language, there is in fact a deeply rooted connection between them, one which goes back in time to the early communication system of our early-human ancestors.

This section follows Mithen's line of reasoning, and is therefore constructed in the following manner: we will start by examining how both music and language are processed in the brain, then investigate the concept of prosody as it appears in both, and lastly we will search for the origins of music and language in the early-human communication system. Mithen's line of reasoning should lead us to the following conclusions: (1) the processing of both language and music occurs in the brain by using the same acoustical analysis mechanism, as a result of which language and music share some of the same pathways in the brain; (2) the emotional response to both music and language is based on the acoustical analysis; and (3) music and language share the characteristic of prosody (among others), because of the nature and evolution of the early-human communication system. Let us go into these issues in more depth.

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[44] This and the following sections rely extensively on Steven Mithen, *The Singing Neanderthals: The Origins of Music, Language, Mind and Body* (Cambridge, Massachusetts: Harvard University Press, 2006). Steven Mithen is a Professor of Early Prehistory and head of the school of Human and Environmental Sciences, Reading University, England.

How Music and Language are Processed in the Brain

Mithen starts by asking, what are the connections between music and language? And where in the brain are the faculties associated with both located? About the latter he concludes:

> The neural networks that process language and music have some degree of independence from each other; it is possible to 'lose' or never develop one of them while remaining quite normal in respect to the other. Moreover, it is apparent that both language and music are constituted by a series of mental modules. These also have a degree of independence from one another, so that one can acquire or be born with a deficit in one specific area of music or language processing but not in others. The separation of the modular music and language systems, however, is not complete, as several modules such as prosody, appear to be shared between the two systems…[45]

In order to further explain this 'independent, yet related' relationship between the music and language systems in the brain, Mithen resorts to Isabelle Peretz's research and model (see graph on next page).[46]

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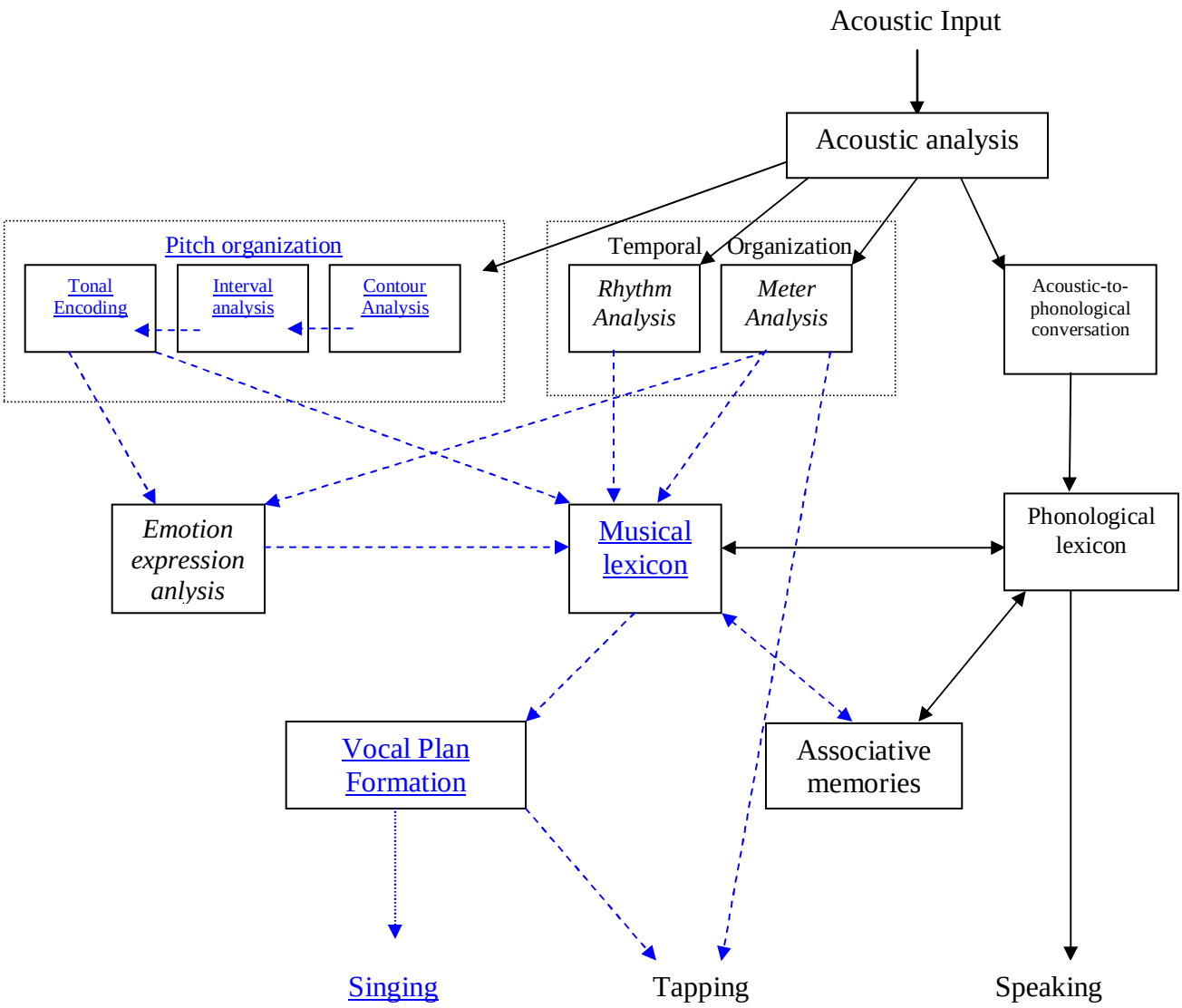
[45] Ibid., 67. To be more specific: "As one might expect, they [researchers] found that each test provoked neuronal activity in numerous and distributed parts of the brain. But some differences were detected. While melody activated both cerebral hemispheres to an equal extent, harmony required more activity in the left rather than the right hemisphere, whereas rhythm activated few areas outside of the cerebellum. Melody and harmony activated areas of the cerebellum, too, but with significantly less intensity than that produced by rhythm." A similar pattern of 'chaotic' distribution was found for language faculties. It seems that there is not one specific area in the brain solely responsible for either language or music; both are scattered in different areas of the brain.

[46] For more information about the graph see: ibid., 62-3.

Graph 1: The Modularity of Music and Language

This model shows how an acoustic stimulus is broken down in the brain by either the music or language modules, or by both. Each box is 'a processing component'; the arrows are 'pathways of information flow between processing components'; the components which are mutual appear with straight arrows and those components specific to music appear underlined and with dashed arrows; the boxes in italics are: "Three neurally individuated components…whose specificity to music is currently unknown."[47]



[47] This graph is a partially modified reproduction of Mithen's graph, 63. Mithen's black and gray colors have been replaced with straight and dashed lines and underlining.

What this model clearly reveals is that any acoustic stimulus, whether it be a spoken word or a musical gesture, is subjected to an acoustical analysis. In this process, the stimulus is broken down by the different processing components such as the temporal organization component, the pitch organization component, the emotion expression analysis, etc., which help determine the exact nature of the stimulus. This analysis reveals the prosody of the sentence, its inflection and intonation, and therefore helps clarify the emotional content of that stimulus.[48]

Baby Talk

In order to further explore the concept of prosody, Mithen turns to a specific and more familiar communication system: the communication system between mother and infant, or to use the proper term, Infant-Directed Speech (IDS). Because infants are incapable of comprehending the literal meaning of words, one must assume that what they comprehend is the vocal inflection and intonation of the parent's voice. "'Baby-talk', 'motherese', and 'infant-directed-speech' are all terms used for the very distinctive manner in which we talk to infants who have not yet acquired full language competence – that is, from birth until around three years old. The general character of IDS will be well known

[48] In Mithen's words: "The music system is, in fact, constituted by two groups of modules, one concerned with extracting the pitch content (pitch contour, pitch intervals and tonal encoding) and the other with temporal content (rhythm and meter). Both the pitch and the temporal modules filter their output through the musical lexicon – a memory bank of musical phrases – and the emotional expression analysis module…If you decide to join in with the song 'Happy Birthday', then the melody will be provided as output from the musical lexicon module, and this will be combined with output from the language lexicon, resulting in singing. If, on the other hand, you were simply required to recall something about the song, the output would be sent to what Peretz describes as the associative memories module. In parallel with this, outputs from the pitch and temporal modules would be directed to the expression analysis module, which would enable you to recognize the type of emotion being expressed by the tempo loudness and pitch contours of the music." Ibid., 64.

to all: a higher overall pitch, a wider range of pitch, longer 'hyper-articulated' vowels and pauses, shorter phrases and greater repetition that are found in speech directed to older children and adults."[49]

Mithen takes great care in explaining the different stages of IDS development and how those affect the infants' emotional development. He observes that the older we become, the more meaning we derive from our parents' intonation regarding their emotional state and intention.[50] (The derivation of meaning from a communication system that relies so heavily on prosody should remind us to a certain extent of the process of listening to music.) Mithen later describes several experiments which deal with IDS and its universal nature and concludes that: "Such experiments demonstrate that in IDS 'the melody is the message' – the intention of the speaker can be gained from the

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[49] Ibid., 69-70. Also: "We talk like this because human infants demonstrate an interest in, and sensitivity to, the rhythms, tempos and melodies of speech long before they are able to understand the meanings of words. In essence, the usual melodic and rhythmic features of spoken language – prosody – are highly exaggerated so that our utterances adopt an explicitly musical character. It is the 'mental machinery' underlying the prosodic elements of language that Steven Pinker claims has been borrowed in order to create our musical ability. But the evidence from IDS suggests that his view of language and music is topsy-turvy: on the basis of child development, it appears that the neural networks for language are built upon or replicate those for music."

[50] "With slightly older infants, changes to the character of the IDS intuitively used by adults indicate the appearance of its second stage, as it now begins to modulate arousal of emotion. When soothing a distressed infant, an adult is more likely to use low pitch and falling pitch contours; when trying to engage attention and elicit a response, rising pitch contours are more commonly used…as the child ages, IDS enters its third stage and its prosody takes on a more complex function: it now not only arouses the child but also communicates the speaker's feelings and intentions. This marks a major transformation in the child's mental life; in all previous 'conversations' the infant simply enjoyed pleasurable sounds and listened with displeasure to unpleasant sounds; all that was important were the intrinsic acoustic properties of the IDS. Now, however, the melodies and rhythms help the child appreciate the mother's feelings and intentions." Ibid., 71.

prosody alone…"[51] As we shall see, this ability is going to prove critical for the performer, when searching for the emotional content of a piece of music.[52]

The Evolution of Music and Language, i.e. 'Hmmmmm'

But what has caused the development of IDS? To explain this, Mithen resorts to the conclusions of Ellen Dissanayake, a child psychologist from Seattle. Dissanayake claims that IDS evolved from the pressing need of the early-human mother to communicate with her infant. The particularly long period in which the human infant is growing and is incapable of taking care of herself, forces her to communicate and establish a rapport with her baby through distance. For example, since one can assume that the early-human mother kept doing her daily chores, which probably occupied her hands, it is safe to assume that she soothed her infant by vocalizing rather than by picking up the infant in her arms.[53]

When coming to determine the nature of this vocalizing, one encounters two opposing theories. The first belongs to Derek Bickerton, who claims that human

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[51] Ibid., 72.

[52] IDS is indeed a fascinating topic, which also touches on the subject of the universality of emotional expression: "The idea that IDS is not primarily about language is supported by the universality of its musical elements. Whatever country we come from and whatever language we speak, we alter our speech patterns in essentially the same way when talking to infants..." Ibid., 72. For more information on experiments done to prove the universality of IDS see Ibid., 72-73, 79.

[53] In Mithen's words: "Dissanayake believes that the musical aspects of IDS evolved as a direct response to the increasing helplessness of human infants as early hominids evolved into early-humans, dismissing the Darwin/Miller hypothesis that male competition and adult courtship provided the original selective pressures for music…ultimately achieving concordance between the emotions experienced by the parent and infant…such concordance was essential, she argues, for developing their relationship and, ultimately, the enculturation of the infant." Ibid., 197.

language evolved from words and grammar: "Human ancestors and relatives such as the Neanderthals may have had a relatively large lexicon of words…"[54] and claims that the evolution of this lexicon and grammar has resulted in what we consider to be modern language. The opposing theory belongs to Allison Wray, who claims that language evolved in a quite different way: "The precursor to language was a communication system composed of 'messages' rather than words; each hominid utterance was uniquely associated with an arbitrary meaning…" and insists that: "Modern language only evolved when holistic utterances were 'segmented' to produce words."

To settle the conflict, Mithen embarks on a journey back in time, 200 million years to be exact, to retrace the origins of language and as we shall see, the origins of music. He commences his journey by examining the communication systems of our closest evolutional relatives, the apes, and derives from it his own theory regarding early hominid communication: 'Hmmmmm'. The following is Mithen's explanation of 'Hmmmmm' as it appears in primates:

> None of the vocalizations or gestures is equivalent to human words. They lack consistent and arbitrary meanings, and are not composed into utterances by a grammar that provides an additional level of meaning. The term that Allison Wray uses for the vervet alarm calls is generally applicable to non-human primate vocalizations and gestures: they are holistic. Secondly, the term 'manipulative' is also generally applicable. The vocalizations and gestures do not appear to be telling another individual about the world in the same way that we refer to objects, events and ideas when talking to another

[54] This and the following quotation are taken from Steven Mithen, *The Singing Neanderthals: The Origins of Music, Language, Mind and Body.* (Cambridge, Massachusetts: Harvard University Press, 2006), 3.

> individual. Monkeys and apes probably simply do not appreciate that other individuals lack the knowledge and intentions that they themselves possess. Rather than being referential, their calls and gestures are manipulative: they are trying to generate some form of desired behavior in another individual…a third feature may be applicable to the African apes alone: their communication systems are multi-modal, in the sense that they use gesture as well as vocalization. In this regard they are similar to human language…finally, a key feature of the gelada and gibbon communication systems is that they are musical in nature, in the sense that they make substantial use of rhythm and melody, and involve synchronization and turn taking…The holistic, manipulative, multi-modal, and musical characteristics of ape communication systems provide the ingredients for that of the earliest human ancestors, living in Africa 6 million years ago, from which human language and music ultimately evolved. [55]

Mithen's theory is very much in alignment with Wray's, but includes several added modifications. Mithen titles his theory, 'Hmmmmm', an acronym, which suggest that the early-human communication system was: (1) Holistic, an utterance which in itself acted as a complete sentence -- for example, the word '*Toomabi'*, meant 'hand over the hand ax' -- the different syllables of the utterance not implying separate words as they would in modern compositional language; (2) Manipulative – suggesting the utterance included an action such as 'hand over'; (3) Multi-Modal – suggesting that the utterance was accompanied by a body motion, a hand gesture for example; (4) Musical – the utterance's prosody resembled the prosody of IDS; and (5) Mimetic – suggesting that the utterance imitated sounds and behaviors found in nature. Mithen also explains that 'Hmmmmm' developed as a result of the *Homo ergaster*'s evolution; meaning its rise to bipedalism (from walking on all four limbs to only two), the increase in communication

[55] Ibid., 120-21.

due to foraging, mate competition, parenthood and other group activities, and the anatomical changes allowing for complex vocalization.

The origin of music therefore lies in the development and nature of the early communication system. In it, music and language, sounds and their meaning, were intertwined and were both used to convey emotions. But then what was it that forced 'Hmmmmm' to separate into the compositional language and music of modern humans? In order to answer this, Mithen examined the divergence in evolution between the European Homo lineage (*Homo neanderthalensis*), and the African Homo linage (*Homo sapiens*). Mithen explains that as result of its brain physiology, the European lineage of the *Homo neanderthalensis* had a 'domain specific mentality', and that because of this physiology, this European lineage was not able to progress beyond the holistic proto-language, i.e. 'Hmmmmm'; it simply did not have the 'brains' to do so. On the other hand, the African Homo lineage, out of which evolved *Homo sapiens* and eventually modern man, has achieved 'cognitive fluid mentality', i.e. the ability to use compositional language, as a result of some critical changes in its brain physiology. The *Homo sapiens*' holistic language had gone through the process of segmentation, [56] which resulted in two distinct forms of communications: language, "a communication system specializing in the transmission of information,"[57] and music, "a communication system specializing in the expression of emotion." As a result of the segmentation process, a split of functions

[56] Mithen explains this process of segmentation as follows: "Wray uses the term 'segmentation' to describe the process whereby humans began to break up holistic phrases into separate units, each of which had its own referential meaning and could then be combined with units from other utterances to create an infinite array of new utterances." Ibid., 253.

[57] This and the following quotation are taken from ibid., 266.

occurred between music and language: "Music emerged as the remnants of 'Hmmmmm' after language evolved. Compositional, referential language took over the role of information exchange so completely that 'Hmmmmm' became a communication system almost entirely concerned with the expression of emotion and the forging of group identities..." The similarities therefore between the expression of emotion in music and in language cease to be surprising since both clearly have evolved from the same source of the early-human communication system.[58]

Mithen's research suggests that the separation between music and language should not be taken for granted, and that if one chooses to look into the evolutionary history of humans, one would realize how closely intertwined music and language are. The emotional content of a musical phrase and the emotional content of a spoken sentence are both processed in some of the same pathways in the brain, and the search for the emotional meaning in both cases lies in the prosody of the stimulus. To conclude, it is clear that we react to music as a stimulus; we respond to it by retrieving relevant information as part of the acoustical analysis process, to use Mithen's terms, or via the 'primary process', to use Freud's term. We can then choose to feel empathy with the performer by using the intricate mechanism of mirror neurons. It seems that at its core the connection between music and the emotions is a physiological one.

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[58] Mithen: "The fact that the music and language systems in the brain share some modules is also to be expected given the evolutionary history I proposed. Because we now know that both originated from a single system. Conversely, the fact that they also have their own independent modules is a reflection of up to two hundred thousand years of independent evolution." Mithen, 274. Mithen also explains the 'problematic' issue of listening to songs: "Here we must note the importance of song – the combination of music and language. Song can be considered as the recombination of the two products of 'Hmmmmm' into a single communication system once again. But the two products, music and language, are only being recombined after a period of independent evolution into their fully evolved forms. Consequently, song benefits from a superior means of information transmission…combined with a degree of emotional expression, from music, that cannot be found in compositional language alone." Ibid, 273-4

Chapter Two

Music and the Emotions, Theories Revisited

> Heaven knows it is difficult enough to say what it is that a piece of music means, to say it finally so that everyone is satisfied with your explanation. But that should not lead one to the other extreme of denying to music the right to be expressive.
>
> Aaron Copland[59]

2.0 Introduction

In the previous chapter the reader was presented with new information regarding the emotions and the origins of music. In contrast, this chapter, a survey of important theories on the subject of music and the emotions, deals with what the music domain has accepted as its leading theories. It will compare and contrast the previously presented information with the ideas of these theories.[60] The conclusions of this comparison will serve as the basis for The Emotional Understanding Method presented in Chapter 4.

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[59] Aaron Copland, *What to Listen for in Music* (New York: Whittlesey House, McGraw-Hill Book Company, 1939), 12.

[60] This chapter also includes some important observations that were made by Malcolm Budd in his book *Music and the Emotions.* See: Malcolm Budd, *Music and The Emotions – The Philosophical Theories* (London: Routledge & Kegan and Paul, 1985). Though Budd does not present a theory of his own, his book, published in 1985, contains a comprehensive and in depth discussion of the important theories on the subject. Throughout it Budd raises some very important and at times crucial observations as to the validity of these theories, but at the same time, he also makes several faulty observations which should be addressed.

2.1 The Map – An Overview

The General Parameters

Much has been written on the subject of music and the emotions by individuals with very different opinions and from diverse domains. Since identifying the basic questions and positions taken by all of these theorists is crucial for the understanding of this document, it seems that in order to encompass all of these different viewpoints and essential questions on the subject, a map would be helpful.[61] Underlying this map lies the basic question we set out to answer: what is the nature of the connection between music and the emotions? Chapter 1 has already given some answers. We acknowledged the work of the associative mind and the important role emotions have in human life, and concluded that music and the emotions are clearly intertwined by what Freud called the 'Primary Process', the act of associating, and by mirror neurons which facilitate empathy. We then studied Steven Mithen's research, and have seen that music, at its base, is tied to emotions through the evolution of the early-human communication system. We have accepted that music and the emotions are joined together in our basic physiology. In Chapter 3, we will see further proof of the connection between music and the emotions through examining the concert hall network and realizing that it revolves around the communication and transformation of emotions through the process of catharsis.[62]

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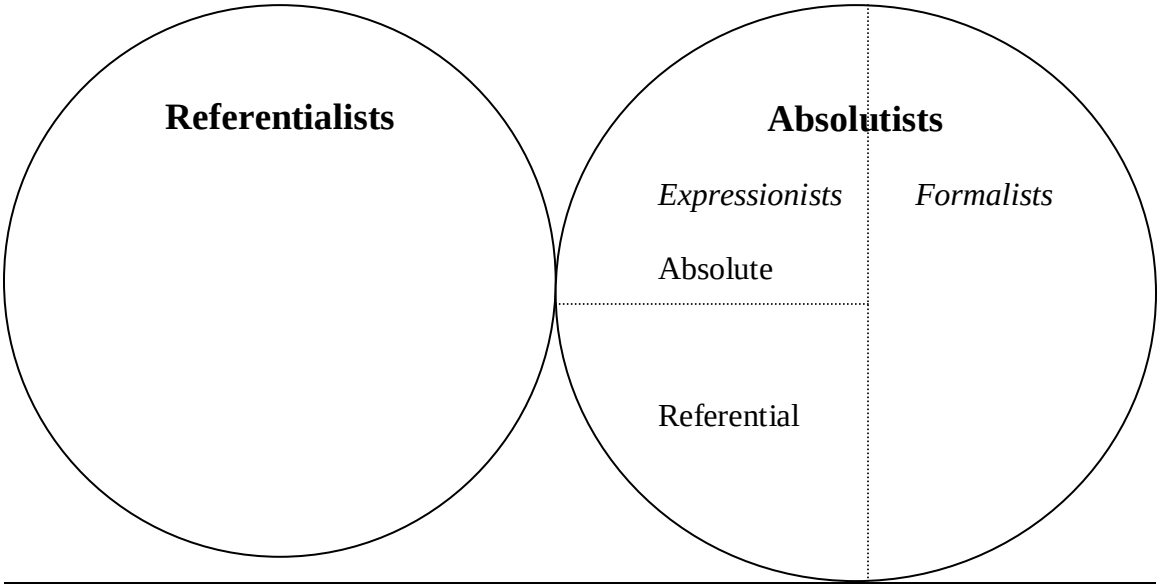
[61] A historical survey of older approaches to the subject will not be given here, since the scope of this document will not allow it. Nevertheless, the reader is urged to familiarize himself with important theories such as the *Affektenlehre* of the Baroque period and the emotional functions of Indian scales (raga), to name two.

After reading the first chapter, it has become clear that emotions are a complex of cognitive, physical, conscious and unconscious factors. In light of this information, some of the theories presented in this chapter will seem somewhat outdated and/or faulty.

All philosophical theoreticians agree that music is capable of arousing emotion; the views just differ on how exactly this 'arousal' is done.[63] In order to put the different theories and conclusions into one large frame, let us use Leonard Meyer's topography for this issue. Meyer divides the different theories in the following manner:



[62] It is important to note here that some theoreticians were led by a slightly different question than the one presented here: what is the nature of the connection between music and the emotions. For example, Leonard Meyer searches for what gives music meaning, while Budd asks what gives music value. We will not get into the complicated discussion of which is the most suitable question for leading this discussion, but note that at the root of all of the research the question presented here still remains: what lies between music and the emotions in the first place? What is the nature of the connection or possible connections between them? Whether the connection gives music meaning or value is a discussion for a more advanced stage.

[63] This consensus is detailed in A. P. Merriem's summary: "Merriem listed ten major functions of music: emotional expression, aesthetic enjoyment, entertainment, communication, symbolic representation, physical response, enforcing community and social norms, validations of social institutions and religious rituals, contributing to the continuity and stability of culture, contribution to the integration of society." Again, philosophers agree on these functions, the opinions differ on the way they are achieved. Mithen, 280.

According to Meyer: "The first main difference of opinion exists between those who insist that musical meaning lies exclusively within the context of the work itself, in the perception of the relationships set forth within the musical work of art, and those who contend that, in addition to these abstract, intellectual meanings, music also communicates meanings which in some way refer to the extra-musical world of concepts, actions, emotional states, and character."[64] Meyer labels the first group "*absolutists*" and the second "*referentialists*".[65] The first group believes that musical structure is what gives music meaning, while the second believes that it is the projection of human emotions onto music, and the ability to associate, which give music meaning. 'Meaning' does not necessarily mean the arousal of emotion, and Meyer's use of Information Theory to explain meaning shows this. But for the purpose of this survey, we are going to use his definitions as follows: the absolutists are those who believe that emotion is aroused by the nature of musical structure while the referentialists are those who believe that it is aroused by the process of association.[66]

Another important distinction made by Meyer is between the different absolutists' positions, namely the "formalist" and the "expressionist" point of views:

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[64] Meyer, 1.

[65] In light of the information of the previous chapters, it seems that another circle should be drawn in addition to Meyer's two, for the 'Biologists' group: Goleman, Mithen, Freud and Darwin, to mention a few. In trying to keep the size of this document in check, and since the conclusions of the 'biologists' have been already discussed at length and stem from such different disciplines, their position will only be discussed in this chapter as responses to claims made by the other two groups.

[66] Again, meaning in music is not the same as an emotional reaction. Understanding music can be done on an intellectual level, aesthetic level and on an emotional level, to just name a few possibilities. Using Meyer's topography in this case is helpful because it shows what different theoreticians consider emotional meaning in music, and this will help us in identifying the possible attitudes to the subject.

> Both the formalist and the expressionist may be absolutists; that is, both may see the meaning of music as being essentially intra-musical (non-referential); but the formalist would contend that the meaning of music lies in the perception and understanding of the musical relationships set forth in the work of art and that meaning in music is primarily intellectual, while the expressionist would argue that these same relationships are in some sense capable of exciting feelings and emotions in the listener…One might divide expressionists into two groups: absolute expressionists and referential expressionists. The former group believes that expressive emotional meanings arise in response to music and that these exist without reference to the extra-musical world of concepts, actions and human emotional states, while the latter group would assert that emotional expression is dependent upon an understanding of the referential content of music.[67]

For the formal absolutists emotion is a by-product of music; if it is aroused, it is a result of the listener's attitude towards music. The meaning and beauty of music, for them, are completely separate from any emotional reaction one might have to music. To the expressionists, emotion can be aroused by musical structure (absolute expressionists), or by the association of emotion with musical structure (referential expressionists).
In establishing the dichotomy between the two primary groups (absolutists and referentialists), Meyer is careful to emphasize that they do not contradict one another and are both equally valuable:

> In spite of the persistent wrangling of these two groups, it seems obvious that absolute meaning and referential meanings are not mutually exclusive: that they can and do coexist in one and the same piece of music, just as they do in a poem or a painting…the musical symbolisms depicting actions, character and emotions, utilized by many Western composers since the middle ages; and evidence furnished

[67] Meyer, 2-3.

> by testing listeners who have learned to understand western music – all these indicate that music can communicate referential meanings.[68]

The position taken in this document is in complete agreement with Meyer's last statement. Though Meyer takes the listener's point of view as his entry point, and this document takes the performer's position as its entry point, the basic statement made here holds true for both (as well as for the composer). It was stressed that the performer must possess two kinds of understanding of the piece: one of the musical structure and the second of the emotional content of the music, and that her objective is the merger of the two. Hence, when the performer is about to perform a piece, s/he must ask herself whether the emotional meaning of the piece is conveyed only in the notes set forth by the composer, or whether s/he must explore the referential meaning of these notes as well, and identify with the emotional meaning. Both sets of decisions and both inquiries are clearly needed. Structural awareness and emotional awareness should both be used by the performer as well as by the listener. One does not contradict the other, but in fact enhances it.

Meyer, in his book, concentrates on the absolutists' point of view and on emotion as it appears through musical structure: "For an adequate analysis of the problems involved in the meaning and communication of the referential content of music would

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[68] Ibid., 2. Deryck Cooke in his book *The Language of Music* supports this position: "However complex and allusive the form of an expressive musical work may be, it is still simply the means whereby the composer has expressed an emotional attitude towards existence by imposing a meaningful order on expressive terms; and it is the continual failure to recognize this fact that is responsible for our generally ambiguous and fruitless approach to music – which can be summed up as 'form is form, and expression is expression, and never the twain shall meet'." Cooke, 213.

require a separate study of its own."[69] Nevertheless, in the last chapter of his book *Emotion and Meaning in Music*, Meyer does create a terminology for discussing the referentialists' point of view, a terminology we will use in the following section.

Associations and Connotations

When asking to uncover the connection between music and the emotions, one is bound to encounter two basic ties: associations and connotations. We have already discussed at length the first of these, associations, in Chapter 1. Freud showed that the human subconscious is capable of making all sorts of connections between seemingly different domains, the domains of music and the domain of emotions being no exception. He has called this ability 'The Primary Process', simply put, one's ability to associate. We have seen that the primary process is chiefly personal. One could connect a major chord with a childhood memory, with a person or with a color, and all would be viable connections. As in a dream state, the associations usually make sense only to the dreamer and only s/he can explain the reason for connecting seemingly contrasting elements. Recent research, such as Isabelle Peretz's, proved that this process is indeed a scientific reality, and not only a psychological theory.[70]

Another scientific discussion of associations can be found in Dr. Thomas Horning's dissertation, which gives a different inside look into the physicality of the

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[69] Meyer, 2.

[70] For Isabelle Peretz's research see: Mithen, 51-53, 56-63.

primary process.[71] Horning sets out to explain scientifically why one experiences an emotional response to music and to describe the neuropsychological process that takes place in the brain when one is listening to music. His explanation begins with a detailed description of the complex process taking place in the brain when one listens to music, in which first the ear and later the brain perceive sounds and translate them into 'information'. Horning claims that it is this translation of sounds into information that gives music meaning, that makes for the associative connection and that causes the arousal of emotion. The building of the information occurs in the short-term memory and since this building is accomplished by means of retrieving information from all parts of the brain, including the limbic system, where emotional memories are stored, the listener ends up retrieving not only relevant 'music information files' of sounds and notes but also 'emotion files', since the latter are similar in structure and content to 'music information files'.[72]

Again, the nature of an association is personal. One can associate the color red with the key of E minor, if one wishes.[73] But for the second basic tie, connotations, matters are slightly different. How is it that we have learned to associate the major chord with happiness and the minor chord with sadness? How did these certain associations

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[71] Thomas Martin Horning, "The Development of a Model of the Psychological Processes Which Translate Musical Stimuli Into Affective Experience" (Ph.D, Case Western Reserve University, 1982).

[72] The reader should contrast Horning's writings with Isabelle Peretz' model and Steven Mithen's graph which are discussed on p. 26. It will suffice here to say that their findings point in the same direction.

[73] The proper term used to describe the association between seemingly unrelated domains, in this case between music with colors, is *synesthesia*. Some composers, such as Scriabin, are known to have associated the notes of the scale with specific colors. For more information about synesthesia, see Grace Tiao, "Speaking in Textures, Hearing in Colors," *Harvard Science Review* (Fall 2005): 65-67. Can be also viewed on: <http://www.harvardsciencereview.org/Issues/fall2005/pages_65_67.pdf >

between music and the natural world become cultural and in some cases universal conventions? Meyer explains:

> Most of the connotations which music arouses are based upon similarities which exist between our experience of the materials of music and their organization, on the one hand, and our experience of the non musical world of concepts, images, objects, qualities, and states of mind, on the other…1) In most cultures there is a powerful tendency to associate musical experience with extramusical experience. The many musical cosmologies of the Orient, the practice of most primitive cultures, and the writings and practices of many Western composers are striking evidence of this fact. 2) No particular connotation is an inevitable product of a given musical organization, since the association of a specific musical organization with a particular referential experience depends upon the beliefs and attitudes of the culture towards the experience. However, once the beliefs of the culture are understood, most associations appear to possess certain naturalness because the experiences associated are in some sense similar. 3) No matter how natural a connotation may seem to be, it undoubtedly acquires force and immediacy through cultural experience.[74]

Connotations, according to Meyer, are associations which are a result of our tendency to associate (the Primary Process), basic natural similarities and sheer repetition. Meyer's definition of connotations will be the one used in this document.

All aspects of music, including pitch, dynamics, timbre and tempo, are responsible for the creation of a connotation. Meyer mentions qualities such as loud and soft, colors such as dark or light, positions such as high and low, and tactile qualities such as rough, smooth or piercing as some primary examples for the making of basic connotations, and adds that: "In general, the more markedly the elements of a sound

[74] Meyer, 260, 262-263.

pattern diverge from neutrality the more likely they are to evoke connotations and the more specific those connotations are liable to be."[75] Furthermore, being able to make associations and connotations would be meaningless unless the associations and connotations carried with them certain emotions: "Probably one of the fundamental conditions for the existence of any connotative complex is the presence of a single-mood response which is common to all of its components. Indeed, connotations and sentiments are so inextricably united that every connotative experience is to some extent a mood experience as well."[76]

Meyer also claims that culturally we have identified, "those modes of behavior, conventionalized for the sake of more efficient communication…" meaning that the expression of a certain emotion has been conventionalized so that all who share that culture, would be able to identify the emotion expressed. Meyer gives the example of grief and its conventional expressions patterns: minimal motion, crying, and a vocal expression which is slightly confined. He also makes the distinction that violent wailing and moaning are not a part of this vocabulary in modern Western culture.[77]

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[75] Ibid., 264.

[76] Ibid., 292.

[77] That one does not necessarily express grief by wailing and shouting does not mean that one does not identify this form of expression with grief. Another interesting point of comparison is with Susan Langer's idea of the life-of feeling. Susanne K. Langer, *Philosophy in a New Key: A Study in the Symbolism of Reason, Rite and Art.* 3rd ed. (Cambridge: Harvard University Press, 1942).

Music, like communicative behavior, "tends to become conventionalized for the sake of more effective communication".[78] We therefore associate certain musical figures with the expression of certain emotions, and because of the constant use of these associations, they have evolved into connotations.

One aspect of Meyer's definition requires further elaboration. Meyer claims that musical connotations can only be understood by those who belong to the same culture. However, recent research presents a different point of view.

Mithen tells us of an interesting experiment, which supports this last claim:

> Ongoing research is beginning to demonstrate that such universal relationships do indeed exist. In 2003, Hella Oelman and Bruno Loeng, psychologists from the University of Tromosø, demonstrated a significant degree of agreement between the emotional meaning that different individuals attributed to a particular musical interval. Their subjects were Norwegians who had been acculturated to a western musical tradition. Oelman and Loeng noted that precisely the same associations between particular emotions and particular musical intervals had previously been found in connection with ancient Indian music – a radically different musical tradition. Their conclusion, that 'these meanings seem to be relevant for the emotional experience of musical intervals of humans across cultures and time, and thus might be universal'…[79]

The research done by Oelman and Loeng, as well as the more general research done by Eckman and Clynes,[80] supports the view that connotations, between certain intervals and

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[78] Meyer, 239.

[79] Mithen, 91.

[80] See more in Chapter 1, p. 5.

emotions and between a facial expression and an emotion, are capable of transcending cultural boundaries and could be understood universally.[81]

The Collective Memory

Though Meyer does not refer to it by a specific name, his writings nevertheless imply that there is in fact an accumulated body of knowledge, a well of information of human experience, which is shared by people who belong to the same culture and perhaps the world at large. The concept of the 'collective memory', or 'collective consciousness', is clearly not a new one and yet its presence becomes crucial when dealing with one's ability to identify connotations between music and the emotions.

According to Meyer: "A melodic figure, a set of modal relationships, or a harmonic progression is experienced time and time again in conjunction with texts, programs, or extra-musical experiences which either designate the mood directly or imply

[81] Meyer also mentions the role of myth in the creation of the listener's connotations. He states that the existence of culturally established images as a result of literature and mythology are largely responsible for the creation of connotations. Again, with this explanation, the problem of cultural boundaries must be addressed. At its essence a myth was created to deal with human experience and therefore with emotions, while including special features of the myth's geographic origins. But then if we consider the Orpheus story for example, we will realize that essentially it holds true for all persons who suffered loss and wish they could retrieve a loved one. That the origin of this myth is Egyptian or even Mesopotamian is somewhat irrelevant, and proof to this lies in the fact that in Israeli literature and in Brazilian literature of past years this myth is still very much alive and well. See Ofir Touche Gafla, *End's World* (Jerusalem: Keter, 2004) and Paulo Coelho, *The Zahir* (New York: HarperCollins, 2005). Both books are Israeli and Brazilian examples of husbands' journeys in search of their dead/lost wives. Myths and therefore connotations derived from myths are more than capable of crossing boundaries and having a universal meaning.

it…Once such associations become habitual, the presence of the proper musical stimulus will, as a rule, automatically evoke the customary mood response."[82]

Cooke concurs:

> Is the traditional language of music, to which we have referred, a genuine emotional language, whose terms actually possess the inherent power to awaken certain definite emotions in the listener [the absolute expressionists view point], or is it a collection of *formulae* attached by habit over a long period to certain verbally explicit emotions in masses, operas, and songs, which produce in the listener a series of conditioned reflexes? [The referential expressionists viewpoint] It seems more likely that the answer is simply both. It would be useless to deny that the continuous and consistent use of certain terms of musical language throughout five centuries or more must have conditioned us to accept them without question; and it must have helped to intensify their effect, pinpoint their character, and codify them clearly…[83]

The idea of a collective memory of musical patterns and their emotional connotations is therefore a given to Cooke and Meyer, as well as to Mithen, who refers to it as 'the musical lexicon's processing component.[84]

But let us not confuse the connotations that can be derived from this collective consciousness with one's personal associations. A fast and loud dancing theme in a

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[82] Meyer, 267.

[83] Cooke, 24-25. He continues: "One can only wonder how (to quote Hindemith) 'Certain patterns of tone setting' ever came in the first place to 'correspond with certain emotional reactions on the listener's part'…it is possible to discover…close natural correspondences between the emotive effects of certain notes of the scale and their positions in the acoustic hierarchy known as the harmonic series; it seems improbable that the 'strength' of the fifth and the 'joy' of the major third, for example should not be inherent in their 'basic' positions in the series."

[84] See Chapter 1, p. 26.

major key could lead one to connote the passage with the emotion of happiness, since if one refers to the collective memory, one would see that in most cases, a loud fast dance melody in a major key is usually attached to this emotion. But one's personal association of the same theme might lead one to a different image. It might be associated, for example, with a memory of a pleasant trip to the country.[85] There is indeed a profound difference between the general connotation and the private association, and one should be careful not to confuse the two.[86]

Another important observation regarding the composer's and performer's relationship to the collective memory should be made. Though, as we have seen, the perspective taken by Meyer and most other theoreticians is that of the listener, these observations, about one's use of the collective memory, hold true for the composer and performer as well. It is important to remember that both composer and performer have listened to music and have developed their associative minds, connoting abilities and 'musical lexicon' processing components. Mozart's music was not created by an artificial intelligence nor was it performed by one. One must take into consideration that at the time of composition and performance, the collective consciousness, connotations and primary process are all working and have not been shut down for the sake of creating

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[85] In some cases it might also arouse a negative association of an unpleasant trip, which will be in opposition to the common connotation.

[86] Another aspect of the collective consciousness is the valuable part it plays in teaching us about emotions. One should also remember that one's reference to any emotions could be made out of one's own experience and also by referring to an experience which exists in the collective consciousness. For example, one might have never been in love, or felt the exhilaration of falling in love, neither physically nor psychologically, but since one is a part of a culture and one perhaps read a book or saw a film in which this emotion has been described and experienced by other people, one could now mirror that emotion oneself.

so-called 'pure' music. To conclude, the artificial distinctions made here between the structuralists' and referentialists' point of views, in fact do not exist. According to Cooke: "Many modern musicians refuse to admit the presence of any emotion in the music at all: it has now become pure sound-structure, an intellectual and aesthetic delight. We are under constant pressure, from the written and spoken word, to make only a half response to all music – to admire the form without apprehending it as expression."[87] It seems that we are asked to put aside and ignore something that is fundamental to our being and to our physiology: our ability to associate.

2.2 The Intersections

The previous section established that the connection between music and the emotions is based on one's ability to make associations between music and the world of human experience. We have also seen that some associations have been ingrained in human consciousness by sheer repetition and have therefore evolved into cultural connotations. Since the number of possible connotations between music and the emotions is so vast, the following section will focus on some general areas from which connotations seem to stem. Because of their fundamental and inclusive nature, these areas will be referred to as intersections.

[87] Cooke, 234.

The First Intersection: Programmatic Music, Representational Music and Pure Music

In this first intersection the discussion revolves around the juxtaposition of three different categories of music: (1) Music that has a connection to text, i.e. music set to text or music which follows a program or has a descriptive title;[88] (2) representational music, i.e. music which is capable of representing or suggesting certain objects, phenomena, etc.; and (3) pure music, which has no text or representational abilities deliberately attached to it.[89] In the case of the first category, emotions can be aroused by the text's implications.[90] In the case of the second category, the object represented by the music can cause certain emotions to be aroused; for example, if the music portrays a storm, it could arouse certain emotions normally associated with a storm, such as fear. In the case of pure music, though, the arousal of emotion is considered to be a more complicated matter, and hence the question that lies at the basis of this next section: can one assume that pure music also carries an emotional meaning when it does not follow a text or when it does not clearly represent an object? Certain scholars, such as Eduard Hanslick, declare total separation between the three types of music. Some others, this author included, claim that the three are, in reality, inseparable. Both these positions are going to be elaborated on in the following discussion, but before venturing in, it is important to clarify the following. Firstly, the two categories mentioned before, music with text and

[88] In this section, we will refer to all types of music connected to text as programmatic music.

[89] Though some obvious overlap between these genres exist, in order to prevent confusion, they will be discussed separately here.

[90] One must remember when setting music to text, one is dealing with the personal response of the composer to a text and that therefore irony and opposition to the text's implications should be included under this category as well.

music with representational abilities, have caused a world of associations and connotations to be created between musical gestures and emotional meanings, a world that can be easily applied to pure music as well; the separation between the categories only describes a superficial element of the music, the existence of text, the depiction of an object or phenomenon, or the lack thereof. Also, the emotional meaning of music lies not only in the existence of such extra-musical stimuli but also in a deeper layer of the music, in the musical line's prosody and in the listener's ability to refer to the world of connotations and associations. One should therefore be careful in attributing the origin of the emotional response to music to one element rather than the other.[91]

Music Set to Text[92]

The immense power of the collective consciousness which creates musical perception, is derived in part from centuries of composers' setting music to text. Here is one of the most common examples: "In most of the songs in Schubert's *Die schöne Müllerin*…the accompanist indirectly imitates the flowing motion of a brook by regular patterns of quavers and semiquavers." [93] This has become such a familiar connotation

[91] The discussion in this section narrows the cause for an emotional response to music to the existence of text or representational abilities. Clearly, one can be affected by several factors at the same time, such as the music's prosody, the performer's charisma, and the state of the listener as well as by the existence of a text. However, the purpose of this section regarding intersections, is to isolate certain characteristics of music which are in this case attached to it, and see if and how they might cause emotions to be aroused.

[92] The reader should compare this following section with Mithen's scientific explanation presented in Chapter 1, p. 25-8. It is clear from Mithen's graph on p. 26 that the arousal of emotion is done simultaneously on several different planes, both as a reaction to the text and as a reaction to the musical line's prosody.

[93] Cooke, 5.

that when one encounters the same patterns in Schumann's or Rachmaninoff's music, one will inevitably make the same connotation. It is also clear that when the music is accompanied by a sung text or program, the emotional content of the piece will become obvious because of the existence of such text.[94] The emotional response to music in this specific case is therefore a result of a very specific stimulus – words. Could we then use this genre of music to help decipher the emotional content of a purely instrumental work? Could one assume that the meaning of a certain musical gesture was implied by a program and text, and would hold true for the same gesture in a 'purely' instrumental work? To go back to Cooke's previous example, can Schubert's regular use of eighth-notes and sixteenth-notes patterns, which so clearly depict the flowing of a stream in *Die schöne Müllerin*, be assumed to mean the same thing when it appears in the *Wanderer Fantasy*? The answer is more often than not, yes. Still, one must be careful and examine the context of the work carefully in each and every case.

Very few theoreticians deny that music that is programmatic and/or text-related may cause specific emotions to be aroused. But some theoreticians seem to think that the same could be not said for pure instrumental music. Their arguments can be challenged

[94] One must be asking at this point if this sort of connotation is based on the purely musical qualities of the line or on the added text attached to it or both? Do we make the connotation between a descending chromatic line in the bass and a lament because of the musical nature of the chromatic line, or because so many laments have been written on this ground bass? It is very difficult to answer this question with certainty and yet, I believe that by the end of this chapter it will become clear that the repetition of certain musical gestures and specific text as well as the specific nature of a musical gesture, are both responsible for the creation of a connotation.

by referring to the primary process, as discussed at the outset of this section, as well as by resorting to the research on prosody, discussed in Chapter 1.[95]

One such theoretician is the famous music critic Eduard Hanslick.[96] Hanslick's main claim is that music is an end in itself and that the value of music lies in its essence and not in any projected emotion or image one might add to it: "The ideas which a composer expresses are mainly and primarily of a purely musical nature. His imagination conceives a definite and graceful melody aiming at nothing beyond itself."[97] Hanslick addresses programmatic music, and claims that its nature is very different from instrumental music and that no analogies can be made between the two. He also refers to the resemblance between motion in music and emotion, but claims that this resemblance is not enough of a condition for identifying emotion in music: "By this we mean that the beautiful is not contingent upon nor in need of any subject introduced from without, but that it consists wholly of sounds artistically combined."[98] Hanslick takes the formal absolutist position, and at the same time discards any other possible position. Though

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[95] Infants respond to the vocal intonation of their mother's speech before they are capable of processing the literal meaning of the words. The musical nature of IDS, suggests that humans are capable of realizing the emotional intention behind a vocal line, even if the meaning of the words is unintelligible or even when no words are attached to it. Whether that line is sung by the mother or by a clarinet, the differences are negligible, and an emotional intention can be derived. See Chapter 1, p. 27. Also consider listening to an opera when one is not fluent in the sung language. The emotional meaning of the aria could still be derived from the musical line's prosody.

[96] Eduard Hanslick, *The Beautiful in Music*. Translated by Gustav Cohen (New York: Liberal Arts Press, 1957).

[97] Budd, 23. The reader should remember that at least some of Hanslick's ideas are presented more as reactions against Wagner's dramatic concepts, and are said in an attempt to justify the more traditional 'abstract' classical forms such as the symphony and sonata.

[98] Ibid., 47.

music does have a value in its own right, one based on its pure structure, it can, as we have seen, also carry a whole different dimension of meaning if one is willing to accept the world of associations and connotations.[99]

Music, as a Representational Art Form

Painting is considered a representational art form because in painting, a chair could potentially represent a chair in reality. The form the chair takes on canvas could be similar to the form a chair takes in reality.[100] Because music cannot represent an object, such as a chair, it cannot therefore, be called a representational art form. Hence, listening to *The Great Gate of Kiev* from Mussorgsky's *Pictures at an Exhibition* (assuming one is not aware of the movement's title), the listener cannot be expected to imagine a gate on the basis of what s/he hears alone. It is only after s/he has learned of this movement's title, that the association between music and gate can be made. Cooke, though, shows that in some other cases music does have certain representational abilities: "There are three ways in which music can represent physical objects. First by direct imitation of something which emits a sound of definite pitch…The second way is by approximate imitation of something which emits a sound of indefinite pitch, such as a thunderstorm…the third way in which music can represent physical objects is by the suggestion or symbolism of purely a visual thing, such as lightning, clouds or

[99] The reader should be reminded of Meyer's and Cooke's comments on the complementary nature of the absolutists' and referentialists' positions.

[100] This is of course, if one puts aside the difference between the canvas' two dimensions versus reality's three.

mountains…frequently, music's three methods of tone painting are fused…"[101] Cooke demonstrates that music can on occasion be viewed as a representational art form; Beethoven's Pastoral Symphony, which Cooke clearly references here, is filled with such examples. If we choose to add to this the listener's ability to identify common connotations and association in the music, for example in the case of the *Great Gate of Kiev*, where the listener should be able to identify the ringing bells and chorus singing, we could surmise that even though music cannot be considered to be a representational art form to the same extent that painting is, it nevertheless does possess certain representational abilities, which could potentially yield an emotional response.[102]

Malcolm Budd nevertheless claims that: "Pure music is a non-representational form of art and in that respect differs from film."[103] Budd insists on distinguishing between music with text and with some representational qualities, and pure music. One can surely agree that indeed the listener is more than capable of appreciating music as pure sounds and having an emotional reaction to such pure sounds. One should also realize that the logical mind does indeed make conscious distinctions between different types of music such as programmatic and purely instrumental. But one must also admit that these distinctions are not necessarily followed when one is listening to music. There is no reason why one's mind will prevent an established connotation which is a result of

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[101] Cooke, 3.

[102] It is important to note here again that a piece of music can convey an emotion without being programmatic or representational at all. One does not have to have a program to realize the grief of Bach's E flat Minor Prelude from Book One of the Well-Tempered Clavier; the music by itself suggests such a feeling.

[103] Budd, 29.

programmatic and representational music to be admitted in a 'purely' instrumental work; compare for example, the last movement of Schumann's *Carnaval* and the second movement of his *Fantasy* Op. 17. For the associative mind, music is music, regardless of whether one calls it programmatic or representational or neither. Once an association has been established as a connotation, it will be identified with or without the logical mind's permission to use to it. Budd would have us think differently. According to him, composers give the listener permission to freely associate with the music only on specific occasions, and in most other cases (pure music) deny it. One still must ask oneself whether Schumann's *Carnaval* and *Fantasy* are so fundamentally different from one another since in the former Schumann gave the movements titles and in the latter he did not? Did Schumann mean to imply that in one work the audience and performer are allowed to free-associate with the music and in the other they are not? Clearly this is not the case. Not even a great composer such as Schumann can stop the listener from imagining, or referring to the world of existing connotations, and frankly one should strongly doubt that that was ever any composer's intention.[104]

Budd claims that music differs from film, i.e. story, in the fact that it is not representational. But we have since seen that music does have some representational abilities, and that with the aid of connotations and associations, music could tell a story quite easily. Furthermore, centuries of music set to text, and four hundred years of opera, show that there are some important overlaps between story and music. As we have seen,

[104] This issue is especially clear in Schumann's music, since so much of his music is inspired by literary works and by his imagination. His choices of titles such as Fantasy Pieces, Fairytales and Forest Scenes for purely instrumental works, are clearly invitations for the audience and performer to free-associate with the music, even if the logical mind would have them labeled as 'pure' music.

the relationship between music and text, between a plot and a musical gesture is a centuries-old relationship. Folksongs, lieder, madrigals and operas have through the centuries guaranteed that the connection between story telling, word painting and music will have its imprint in one's consciousness. One only needs to consider any of the Romeo and Juliet renditions, opera or ballet, and one will witness the inseparable link between story and music.[105]

It seems therefore safe to say that programmatic, representational music and pure instrumental music all operate under the same laws. Tchaikovsky's ballets and operas are therefore not as fundamentally different from his symphonies and concerti as Budd would have us believe. No one can say with absolute certainty that when Tchaikovsky was composing his instrumental works he didn't see a ballet choreographed or imagine a story line to the music. It would be peculiar to think that when Tchaikovsky was composing an instrumental work he was engaging in a profoundly different compositional technique from when he was composing a programmatic piece.[106] According to the information presented in Chapter 1, we can safely assume that the associative mind does work continuously, and that it is not activated and deactivated at will.[107]

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[105] Cooke gives a wonderful example to show how imprinted these connections are in our consciousness: "Within the orbit of tonality, composers have always been bound by certain expressive laws of the medium, laws which are analogous to those of language…try singing the word 'Crucifixus' to the music of Handel's Hallelujah chorus…" Cooke, 14-15.

[106] This quotation is taken from the program notes to Tchaikovsky's Fifth Symphony, written by Michael Steinberg: "There is, however, a notebook page outlining a scenario for the first movement: 'Introduction. Complete resignation before Fate, or before the inscrutable predestination of Providence. Allegro. (1) Murmurs, doubts, plaints, reproaches against XXX. (2) Shall I throw myself in the embraces of faith???" Michael Steinberg, "Pyoter Ilyich Tchaikovsky, Symphony No. 5," *Tanglewood* (Summer 2006):39-43.

The Second Intersection: Motion

The second intersection between music and the emotions revolves around the similarities between the human body's motions and motion found in music. We have seen that the physiological elements of emotions manifest themselves in part in bodily motions, so when similar motions and gestures appear in music, an easy association between the two can be made. According to Meyer, "Mood association by similarity depends upon a likeness between the individual's experience of moods and his experience of music. Emotional behavior is a kind of a composite gesture, a motion whose peculiar qualities are largely defined in terms of energy, direction, tension, continuity, and so forth. Since music also involves motions differentiated by the same qualities, 'musical mood gestures' may be similar to 'behavioral mood gestures'."[108] Obviously, any motion in music that resembles a dance, whether it be the last movement of Beethoven's Emperor Concerto or a Waltz by Johann Strauss (Senior or Junior), will create a clear connotation with an emotion.[109] And dance motion is by no means the only possible motion. For example, Schumann's whirling winds in the first and last movements of his Op. 22 Piano Sonata, or Brahms' pastoral tempi for the Op. 8 Piano

[107] On a more practical note, if one considers the great composers' output one will find, that almost all have written a tremendous amount of vocal music. The comparison between Mozart's operas and his instrumental writing is unavoidable, and a list of similar analogies between the vocal works of such composers as Schubert, Schumann, Brahms and Debussy and their instrumental works is as immediate. One only needs to compare the Four Serious Songs Op. 121 by Brahms with his last piano piece Op. 117, Op. 118 and the Clarinet Sonatas, Trio and Quintet, and the way in which the three-octave unison is used in all of these works, and one will realize how strongly the vocal writing is connected to the instrumental and how both stem from the same emotional core, taking one's leave from life.

[108] Meyer, 268.

[109] This is not to say that a dance connotation can only create an association with positive emotions, there are many examples of sad dances, like some of Chopin's Mazurkas.

Trio's opening measures, are all clear examples of how motion in music can imply an emotion of either frenzy or tranquility.

In *The Meaning of Music,*[110] Carroll Pratt, another notable theorist on the subject of music and the emotions, assumes a somewhat bipolar position on the connection between music and the emotions. First he denies the connection between music and human emotions by stating: "We attribute to inanimate objects characteristics that are specific to living things…Ruskin gave the name 'the pathetic fallacy' to this falseness in our impressions of external things induced by strong emotion…"[111] Essentially Pratt claims that the listener is projecting his emotions onto an inanimate object: music. That one will attribute these 'living things'' characteristics to music because of associations and connotations, and not because one suddenly believes that music has taken a physical form, is not an option for Pratt. He also is clearly opposed to the possibility of empathic listening. He claims that music is an inanimate object and points to the fact that since music is not a living entity, it is not capable of transferring emotions, and that therefore there is no possible way for one to empathize with it. One must oppose these statements. In Pratt's view music is an inanimate object; it is merely sounds in the air and exists as shapes on paper. But music does not exist in isolation. It cannot seriously be considered an inanimate object because it wouldn't exist without a performer, a living human being, breathing life into it on stage. The emotions put forth by the composer expressed as choices of notes on the page together with the performer's

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[110] Carroll C. Pratt, *The Meaning of Music* (New York, 1931).

[111] Budd, 38.

emotions on stage are what the audience is empathizing with, not abstract sounds. The projection of emotion happens because there are other human beings involved in the performance of music. The only true pathetic fallacy here is the isolation of music from the rest of the variables involved in a performance.[112] Later on, Pratt changes his position and claims that music and the emotions are tied because musical motion and body motion are similar. Since emotion is the motivating factor behind body motion, it can also be aroused when the same motion appears in the music; music sounds and looks the way emotions feel.[113] Pratt is then in complete agreement with Meyer and claims that because there is movement in the body when one experiences an emotion, and because music is capable of conveying motion, a resemblance exists between the two. Fast and slow tempi could then be associated with different emotions because they share a similarity of motion. This lands Pratt with a comfortable position in the absolutists' circle, as a referential expressionist.

The Third Intersection: The Voice

Being both the source of most audible expressions of emotions in human life and the most basic tool for music making, the voice is, as we have seen in Chapter 1, the main reason for the connection between music and the emotions.[114] Since this intersection has been previously discussed, only a few other observations should be made here. In *The*

[112] The connections between the concert hall variables and the processes that take place in between them will be elaborately discussed in Chapter 3.

[113] For a more elaborate discussion of Pratt's position see Budd, 46-47.

[114] Meyer: "Because moods and sentiments attain their most precise articulation through vocal inflection, it is possible for music to imitate the sounds of emotional behavior with some precision." Meyer, 268.

Descent of Man,[115] Charles Darwin traces the origins of music as a phenomenon in the natural world, to the vocal communications systems of the animal world. Darwin claimed that the existence of music was a result of sexual selection – the desire to reproduce and choose the best possible mate. In order to facilitate reproduction, certain species have developed voice calls that would attract the attention of a potential mate and which will make them more desirable than others. Modern music, as far as Darwin is concerned, is just a continuation of this behavioral pattern.

Steven Mithen on the other hand, has shown that though sexual selection was indeed a powerful force in the evolution of both language and music, it was not the only working motivation. He adds that the rise to bipedalism, the increase in communication due to foraging, mate competition, parenthood and group activity were all motivating factors in the creation and evolution of the early-human communication system, of which, as we have seen in Chapter 1, music was a part.[116]

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[115] Charles Darwin, *The Descent of Man* (New York: Prometheus Books, 1997).

[116]In Mithen's words: "Homo habilis most likely used vocalization and body movements to express and induce emotions in a manner that far exceeded any modern non-human primate but that was quite restricted in comparison with modern humans, owing to the possession of a relatively ape-like vocal tract and limited muscular control. Both vocalizations and movement would have been substantially enhanced following the evolution of bipedalism, so that later species of Homo were able to engage in extensive mimesis in order to communicate about both the natural world and their emotional states. In both Homo ergaster and Homo heidelbergensis, singing may have been a means of attracting mates and a behavior that was subject to some degree of sexual selection. Singing would have also been a means to reassure infants when 'put down', and to facilitate their emotional development and the acquisition of an adult communication system. Finally, as cooperation was essential in those Early Human societies, singing and dancing would most probably have been used to engender social bonds between individuals and groups." Mithen, 234. For a more elaborate discussion of Darwin's position and possible opposition to it, see Mithen, Chapter 12.

The Fourth Intersection: Beauty

Unlike the previous intersection, beauty offers a much more complicated connection between music and the emotions. The subjectivity of one's definition of beauty and beauty's possible effects on the listener make this intersection difficult to address. Edmund Gurney, in his book *The Power of Sound*, nevertheless, does attempt to address this issue.[117] Gurney starts by making similar remarks to those made by Freud and Meyer: "Our reaction even to the most abstract visual forms is everywhere influenced by their likeness to the forms of phenomena in the natural world: we do not respond to them in complete abstraction from reference to the natural world."[118] He later adds: "But our reaction to melodic form is undetermined by any resemblance to similar forms in the natural world: we respond to them in complete abstraction from reference to the natural world…"[119] Why this should be the case, that melodic forms share no resemblance to the natural world, Gurney does not specify. He does resolve the conflict in favor of the associative mind by referring to motion: "Musical motions express extra-musical moods and feelings through their resemblance to physical motions."[120] For Gurney, the smallest building blocks that should be considered in regard to the issue of music and the emotions are short melodic phrases or 'short melodic forms', to use his term. Music, for him, is made out of these short phrases, and in them, he believes, lies the answer to the

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[117] Edmund Gurney, *The Power of Sound* (London: Smith and Elder, 1880).

[118] As quoted in Budd, 55.

[119] Ibid., 53.

[120] Ibid., 65.

connection between music and the emotions. He distinguishes between those short melodic phrases which he finds beautiful and those, which to him are not. Beauty, according to Gurney, is the cause for the intense enjoyment one experiences when one listens to music. He also claims that the emotional response to this form of beauty is unique.[121]

That what one might consider beautiful in music might also serve as a magnet for one's attention, and a cause for some emotional excitement is undoubtedly true. When one listens to a particular melody (and one should also include here a particular harmony, rhythm, or timbre), that one might consider beautiful, one often does feel enjoyment. But then this is also true in the case of the performer being particularly fetching – beauty is a magnet and a cause for enjoyment. But is beauty the main reason for the arousal of emotions in music? And is enjoyment the only possible emotion aroused? Let us concentrate on beauty as it might appear in the actual music and disregard the performer's physical appearance for the time being. The beauty of structure (and in structure one can include everything from an interval to the entire form of a piece) is indeed capable of creating strong emotional reactions. The opening chords of Debussy's Violin Sonata and the relationship between them could be to some so breathtakingly beautiful that these measures in themselves are enough to send the listener into a state of ecstatic joy. Beauty of tone, of sound combinations or of original architecture, are to a great extent the reasons for one's attraction and emotional response to music in the first place.

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[121] "The prime characteristics of music, the alpha and omega of its essential effect: namely, its perpetual production in us of an emotional excitement of a very intense kind, which yet cannot be defined under any known head of emotion. So far as it can be described, it seems like a fusion of strong emotions transfigured into a wholly new experience…" Gurney, 120.

But there are several major problems that arise from introducing 'beauty' as an intersection between music and the emotions. First, what is it that makes something beautiful in music? And then is it really only the beauty of structure that creates the emotional reaction? The answer to the first problem is fairly simple. Beauty is in the eye of the beholder, or in this case, in the ear of the listener. It is a subjective point. Some might consider the *Rite of Spring* to be a beautiful piece of music, some might not. Each person has different standards for beauty, but this does not negate the original premise that beauty plays a powerful part in arousing the emotions. The more troubling issue here is that according to Gurney, enjoyment, caused by beauty, is the main emotion we experience when we listen to music.[122] To conclude, beauty should be strongly considered as a powerful intersection between music and the emotions, but should be treated with much caution.

[122] Another problem that arises form his theory is the question of beauty's origin. Can one really distinguish between the beauty of the structure of the opening phrase of Debussy's Afternoon of a Faun and the beauty of a specific performance? Can one say with certainty that what one finds beautiful is the structure of the music, the combination of notes, the timbre, the rhythm of the phrase and not the interpretation of the flutist who infuses the phrase with a beautiful tone and tenderness? No clear answer is possible here. One might also argue that the flutist is already combining both structure and the emotion in her performance, and what one finds beautiful is already a merger of the two.

The Fifth Intersection: The Composer

Undoubtedly, the last century has profoundly challenged the composer's involvement in bringing music and the emotions together. In their writings composers such as Hindemith, Stravinsky and Cage have put forth different opinions as to what music is, what is the role of the composer and the place of emotions in the creative process. It seems therefore quite necessary to open this issue for discussion and understand the role of the composer in bringing music and the emotions together. Before venturing into the discussion of the structural aspects of the composer's work, it is important to remind ourselves, that as a human being, the composer is also subjected to the same principles of association and connotations. As the rest of humanity s/he is not immune to them and s/he cannot avoid them, though s/he can consciously oppose them, as so many composers in the last century have.

What are the composer's building blocks? What are the structural tools at his disposal? One can mention here pitch, rhythm, dynamics, timbre and form, as the most general groups of musical building blocks. As we have seen, emotion can be aroused as a result of musical structure, by both associations and connotations (the referentialists' point of view), and/or as a result of the actual musical building blocks (the absolutists' point of view). Whether emotion is the cause for ordering these elements or is their result, is where opinions differ.

Let us start this discussion with Meyer's theory with regard to how a composer incorporates emotion into music. When coming to define emotion, Meyer says: "Emotion or affect is aroused when a tendency to respond is arrested or inhibited."[123] In this quotation Meyer identifies yet another common thread that runs between musical structure and the emotions, i.e. tension and its resolution. Meyer is specifically referring to the fact that emotions are usually aroused by one of the two possibilities: satisfaction or the lack of satisfaction. Emotions indeed revolve around the axis of satisfaction or lack of satisfaction and resulting tension. But one should remember that tension is not the sole indicator of one's emotions and more importantly, tension in itself cannot disclose the identity of the specific emotion one is experiencing.

Meyer sees musical structure as obeying the same principles that motivate emotional response, the inhibition and fulfillment of desire: "Emotion – felt is aroused when an unconscious expectation – a tendency to respond – activated by the musical stimulus situation is temporarily inhibited or permanently blocked."[124] Meyer suggests that behind every harmonic progression and interval resolution, lies a basic expectation; one usually expects a dominant chord to resolve to a tonic chord, a dissonance to a consonance, etc. When one's expectation is 'arrested' and one perhaps hears a deceptive cadence instead of an authentic one, one's expectations are 'temporarily inhibited' and emotions are aroused.

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[123] Budd, 155.

[124] Ibid., 160.

It is important to note Malcolm Budd's objections to Meyer's point of view: "It is clear that it is integral to music that it should create intramusical expectations in the practiced listener. But these expectations – whether conscious or unconscious – are not automatic response patterns: they do not consist in a series of mental and behavioral responses that succeed one another in determined order…"[125] One must argue against this position. Most trained musicians, including composers, are taught the basic rules of harmony and interval resolution, of counterpoint and voice leading, different possible rhythmic patterns and rhythmic displacement. Musicians learn to identify these 'determined orders', it is an integral part of the musical language and of musical training. They might not be automatic but they are ingrained. Mithen supports this claim: "Tonal knowledge is probably the closest that music comes to having a syntax – for although the rigid rules apparent in language syntax do not apply, tonal knowledge creates expectations about what pitches will follow each other, especially when a piece of music comes to its end." Mithen then describes Burkhard Maess's experiments proving that even uneducated listeners are capable of realizing 'determined orders' in music:

> Maess and his colleagues adopted this approach, interpreting harmonic incongruities in music as the equivalent of grammatical incongruities in speech. The participants in their experiments, all non-musicians, listened to chord sequences that conformed to the rules of tonal music. As a sequence was played, the chords created expectations in the listeners as to which chords would come next. Maess then introduced chords, ones that did not conform to the rules of Western music, and used MEG imaging to measure the changes in brain activity that this caused. If one brain area became more active than it had been before, then that was likely to be where musical syntax was being processed. Maess found that this did

[125] Ibid., 160.

> indeed happen, and that the area was the same as that in which speech syntax is processed – Broca's area.[126]

Maess' experiment shows that though we often process music in a subconscious manner, we somehow intrinsically understand tonal tensions. It also proves that music does obey certain rules and that the exceptions to these tonal rules are immediately registered in the brain as anomalies.

Only by knowing the rules can one truly understand and appreciate when they are broken. And since composers often depart from the norms of their period, it becomes even more important for the performer to be able to identify which of the norms were broken and why, and to understand these exceptions as they arise. When a rule is broken, and for example a harmony that does not seem 'appropriate' appears, or when a five-measure-phrase appears instead of a symmetrical period, the ability to identify these cases as unusual becomes critical to one's interpretation. The issue is therefore not whether these determined orders exists, as they clearly do, but whether the performer and listener who have not studied them, would be able to identify them as such. Structure is indeed partially responsible for the creation of tension and the arousal of emotion. The combinations of sounds in expected or unexpected patterns within a certain frame will surely cause the listener to feel the arousal and release of tension in music.[127] At the

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[126] Mithen, 66.

[127] Another interesting viewpoint is discussed in Chapter 5 of Budd's *Music and the Emotions*. This chapter discusses Schopenhauer's theory. Schopenhauer views the motion in music as being similar to the motion of the human will. The motion in a phrase is similar to how one moves through life: "The sense in which music is a representation of the will is that the most important elements in musical structure and close counterparts of the essential features and forms of the will as it manifests itself in time…" and: "Thus music mediates between the world as representation and the world as will. It enables us to experience the

same time, Meyer, as the opening of this chapter has already shown, has little problem admitting that the referentialists' point of view is equally valid:

> Often music arouses affect through the mediation of conscious connotation or unconscious image processes. A sight, a sound, or a fragrance evokes half-forgotten thoughts of persons, places and experiences; stirs up dreams 'mixing memory with desire'; or awakens conscious connotations of referential things. These imaginings, whether conscious or unconscious, are the stimuli to which the affective response is really made. In short, music may give rise to images and trains of thought which, because of their relation to the inner life of the particular individual, may eventually culminate in affect.[128]

We can therefore conclude that the composer arouses emotion by the nature of his musical structure as well as by his ability to realize the associations and connotations that might arise in himself and in the listener as a result. The following question is then how conscious is the composer of this process? And does it matter? Aaron Copland answers this question:

> Now the composer has an idea. He wants to know what he has. He examines the musical line for its purely formal beauty. He likes to see the way it rises and falls, as if it were a drawn line, instead of a musical one…but he also wants to know the emotional significance of this theme. If all music has expressive value, then the composer must become conscious of the expressive values of his theme. He may be unable to put in into so many words, but he feels it! He instinctively knows whether he has a gay or sad theme, a noble of diabolical one. But sooner or later he will probably instinctively decide what the emotional

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innermost nature of the world as it were from within – not from without, as is the case when the will is objectified… in the natural world and we experience it as representation – yet without our paying the normal price when the will is experienced from within, the price of suffering." Budd, 94.

[128] Meyer, 256.

> nature of his theme is, because that's the thing he is about to work with…[129]

He continues discussing the process of adjusting the music to match an emotional intention:

> Merely by changing the dynamics…one can transform the emotional feeling of the very same succession of notes. By a change of harmony, a new poignancy may be given the theme; or by a different rhythmic treatment the same notes may result in a war dance instead of a lullaby. Every composer keeps in mind the possible metamorphoses of his successions of notes…[130]

Granted, not all composers will admit to this level of awareness regarding the adjustment of the music to match an emotional intention for a composition. What seems stranger though is that some of them completely deny it.[131]

Cooke, in his book *The Language of Music*, examines music's building blocks and the emotional connotations that are usually attached to them. This act of cataloging emotional connotations and meanings gives him a significant insight into the act of composition. Cooke argues that the creative imagination transforms emotions into musical form. As a result of this transformation, the composer's emotional energy is converted into a durable, transportable and reproducible form of energy. As Cooke puts it, "the score is simply Beethoven's message down the years: 'pick up a D trumpet and

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[129] Copland, Chapter 3.

[130] Ibid., Chapter 3.

[131] In his book about Brahms' Piano Quartet Op. 60, Peter Howard Smith demonstrates that at times even composers such as Brahms, considered by many to be a "purist", had at times a specific mood in mind for a composition. In the case of the opening movement of the Op. 60, Brahms is aiming at suicidal feelings, or to be more specific, the feelings one has when one is points a gun at himself. Peter Howard Smith, *Expressive Forms in Brahms's Instrumental Music: Structure and Meaning in His Werther Quartet* (Indiana University Press,2005), 3.

play these notes at this dynamic level, in this rhythm, at this speed, and everyone within hearing it will know how I felt.' "[132] At the same time, when it stimulates a response in listeners, music is transformed back into emotion:

> Just as Beethoven's feeling of joy, reaching a high pitch of excitement, must have powerfully stimulated the memories of musical elements attached to it, until one day it was suddenly converted by the creative imagination into a form of musical energy …When that form of musical energy is let loose on us by the performance of the actual sounds, it must powerfully stimulate *our* memories of similar musical elements; and through them must violently arouse the feelings attached to them, and the emotional faculty whence these arise, which must in the very nature of things be the emotion of joy. It must be in some such way as this that we transform music 'back' into emotion.[133]

The positions of Cooke, Meyer, Mithen and Horning are all similar. Musical connotations as both physiological and psychological phenomena are partially responsible for the arousal of emotion in listening to music. They are the convergence factor between emotions and sounds. But Cooke neglected to mention one important fact. In order for Beethoven's cry of joy to be heard, another human being must be involved, and that is the performer.

One last observation, even if one allows for associations and connotations to be taken into consideration as one is listening to a piece of music, one can never be absolutely sure that one is interpreting the composer's intention correctly. In functional language words usually have a distinct and agreed-upon meaning that is understood and shared by all of its speakers; the phrase, "the dog is dead", has a specific meaning that

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[132] Cooke, 209-210.

[133] Ibid., 208.

will be understood by those who speak the English language. While in music, gestures such as chords and intervals do not have such a specific meaning and yield themselves to different interpretations of the different composers and performers. The C major chord does not have one agreed upon connotation, and could have different ones at different junctures of the same a piece. The typically ascribed emotion of 'happiness' to the C major chord or to the major tonality in general is not necessarily the emotion that Debussy or Scriabin would have ascribed to it. But then, the objective was never to find the emotional intention behind a single chord without referring to the context in which it appears. One must pay close attention to not only the chord, but to the entire context of the musical gesture and consider the potential meaning at each and every juncture as well as for different composers. (Consider, for example Mozart's Sonata in C major K. 330, Haydn's Piano Sonata in C major Hob. XVI:50 and Beethoven's C major Piano Sonata Op. 2 No. 3. All three works are in C major, but each one possesses a completely different character.) This being said, most associations and connotations simply make the connection between the musical particle and its most common use. And in more cases than not, C major, and the major tonality do imply positive emotions. The following comment by Steven Mithen can serve as a good summary: "Musical phrases, gestures and body language are holistic: their 'meaning' derives from the whole phrase as a single entity."[134] When searching for the emotional intention behind a phrase, one has to use a holistic approach and examine the context as much as one spends examining the different parts.

[134] Mithen, 25.

The Sixth Intersection: The Performer

Since this entire document revolves around the performer, the discussion in this section will concentrate only on reestablishing the performer as one of the important intersections between music and the emotions. One has been accustomed to think that the composer is the one who is ultimately responsible for the structure of music and has the final word on which notes, dynamics, tempi and articulation will be used in the piece. Unless one is dealing with the practice of improvisation or ornamentation, or contemporary instances where the performer is instructed to create the music from scratch, it seems that very little change regarding the structure of the composition could occur at the hands of the performer. Or can it? This question will be answered shortly.

Music does not exist in isolation. Therefore when Cooke speaks about Beethoven's cry of joy he should be mentioning the trumpeter who is expressing this cry of joy, and when Meyer discusses the emotional tension in a phrase he should also be discussing the performer who realizes this tension and brings it to life. This omission of the performer as one of the crucial variables, arising from the authors' desire to concentrate on another element or simply from neglect, is highly unfortunate. Cooke for example writes: "Let us first of all completely ignore the problematic part played by the performer. For our purposes, the problem has quite a simple solution: if the performer is unmusical, the chain of communication is broken or impaired; if he is genuinely musical, it is undamaged. We will imagine the ideal case of a great artist, who is able to identify

himself entirely with the composer's emotion, and transmit it to us practically unmodified in a performance such as the composer himself imagined."[135]

With Cooke's comment in mind, let us now go back to the question presented at the outset of this section: who is it that determines musical structure, the composer, the performer or both? Most of the theoreticians on this subject would have us believe it is the composer. Not necessarily because they truly believe so, but because, as Cooke says, for the purpose of their discussion, it makes it much simpler to refer to musical structure as an absolute phenomenon. But musical structure also relies heavily on the performer's decisions, almost to the same extent that it relies on the composer's original ones. Beethoven's cry of joy, if played too slowly, will become a funeral march. Each performer creates her own structure for a piece, by making specific choices regarding the tempi, colors, articulations and phrasing, which are (hopefully) ones based on clues left by the composer. There is no ultimate performance or perfect rendition of a piece of music. Any discussion of a piece of music must take into consideration the involvement of an equal and volatile decision maker, the performer.

This is not to say that as a performer, one does not have an obligation to the composer and to his original intentions and that s/he does not have to do her utmost to figure out and execute the composer's intention, but rather to stress that somewhere in the discussion of the roles of performers and composers, there was a mistaken shift of balance. The composer became God, his score became the word of God and the

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[135] Cooke, 204.

performer became merely a servant. This shift in balance is a tragic mistake that still operates in current perception and teaching today. We are unable to hear the Elgar Cello Concerto without a Jacqueline du Pre, or Bach's *Goldberg Variations* without a Glenn Gould.[136] One could claim that the composer has one hundred percent control and ownership of a work when it is still in her studio, a control which s/he cedes to the performer when the latter is performing the work. It is a relationship of total equals. The structure of the music is equally dependent on the artists' performance decisions and on the notes and musical decisions of the composer, the person who initially conceived it. Elgar's notes meet du Pre's spirit, Bach's variations meet Gould's artistry.

Let us then discuss the performer's role in a little more detail. Though in essence, Cooke is very much in agreement in his description of the process that takes place on stage with those descriptions we have encountered in the second chapter, his choice of words reflects the basic misconception.

Let us examine his usage of the words 'musical' and 'unmusical', and their potential meaning. How is it that a man who is so careful with identifying every interval and its possible emotional meaning is careless enough to reduce the performer's duties to the single one of 'being musical'? Does 'being musical' refer to the performer's structural analysis abilities, her technical abilities, or her brain physiology? Cooke says that the performer should be able "to identify entirely with the composer's emotion and

[136] This is not to say that these particular interpretations are better than others; there are of course the interpretations of the Bach by Wanda Landowska and of the Elgar by Paul Tortelier. It is to say the performer's interpretation, and this could be one of many wonderful artists, is as important as the composer's notation of the score.

transmit it without being modified"? But why should it not be modified? How could Gould become Bach? And du Pre, Elgar? In fact, why would Cooke refuse one of the most basic chains in the creative process, the adding of the performer's skills and decisions to the work, her interpretation? Cooke has been used here only as an example; these same questions should be raised against most writers on the subject of emotion and music, as most of them do not even mention the performer. The performer serves as an important intersection between music and the emotions. S/he arouses emotion with her interpretation of the score, her sheer physical presence on stage, and psychologically, by allowing the audience to empathize with the emotions s/he is expressing.

The Referentialists

More detailed descriptions of the role and process of the performer can be found in the writings of the theoreticians Meyer calls the referentialists. In the words of Tolstoy, "art is a human activity consisting in this, that one man consciously by means of certain external signs, hands on to others feelings he has lived through, and that others are infected by these feelings and also experience them."[137] Tolstoy does not distinguish here between the composer and performer as artists; both use their emotions, one to create the music on paper, the other to bring the music to life on stage. Though the associative mind is not mentioned as such by the referentialists, its existence is nevertheless the underlying assumption that enables these writers to connect poetry, acting, and emotions to music.

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[137] Budd, 121.

R. K. Elliot, for example, ties music with poetry, through the existence of a speaker in both art forms. Elliot claims that when one is listening to a poem one can usually clearly identify the speaker. One then faces the option of either simply empathizing with the speaker or in fact 'becoming' the speaker. This means that one can listen to the poem from 'without', i.e. listen to somebody's grief and empathize with it, or one can listen from 'within', i.e. feel the grief of the speaker as though it were one's own grief. Elliot does say though that the emotion "will not be experienced exactly as it would be if it were to be experienced outside the expression of Art."[138] He clearly claims that there is a fundamental difference between emotions which are experienced in reality, and those experienced in art.

To clarify this difference, Elliot calls the two possible ways of experiencing emotions **Primordial**, the experience of emotion in reality and as a reaction to a real event, and **Non-Primordial**, the experience of emotion in a non-real environment such as the imagination. Meyer supports this distinction: "Since musical effective stimuli are obviously different from the referential stimuli of life, there will always be a generic difference between musical affective experience and the experiences of everyday life. From this point of view musical experience is unique."[139] Kendall Walton adds a different twist to the distinction between real and artistic emotion by saying that in fact one does not really feel sadness for a fictional character such as Anna Karenina, but feels

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[138] Meyer, 126.

[139] Ibid., 269.

what he categorizes as make-believe sadness.[140] One can, according to Walton, envision a scene in one's imagination and react to it as though it were a 'real' event, while knowing perfectly well it is not.

Two important distinctions should be made here. The first is that all three, Elliot, Meyer and Walton, are referring to emotions perceived by the audience, and not to the emotions of the composer or performer. This means that though their distinction might be true for the listener, it might not be as true for the composer and performer; the emotions that they are using to create could be very real.

The second distinction has to do with identifying the difference between the two possible states of primordial and non-primordial, and with the realization that a whole myriad of experiences lies dormant in between. As we have seen in Chapter 1, there are many different levels of experiencing emotion and empathy, many more than just two possible states. The problematic nature of emotions should alert us to the fact that it would be very difficult to establish on which level one (composer, performer, and/or audience member) is experiencing emotion in an artistic performance. To some the suspension of disbelief is difficult, and the reality on stage is only perceived as an artificial one; to others, telling the difference between the reality on stage and real life is a difficult task.[141]

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[140] Budd, 128.

[141] When trying to establish the level of authenticity of an emotion in an artistic experience it might be helpful to ask the following: why is it that one jumps out of one's chair in horror films? If indeed fear is different in art than in reality, there would be no reason to jump. Meyer takes the opposite approach: "Merely because the musical designation of a mood or sentiment is comprehended by the listener does not

As we have seen in the previous section of this chapter, and as was made clear by the similarity of prosody between language and music, the analogy between a speaker in a poem and a speaker in music is quite a natural one: "Music can sound like the vocal expression of emotion…"[142] says Budd. Both Elliot and Walton concur, saying that one can associate emotions expressed vocally with certain qualities in a melodic line; a laugh or a sob, expressed loudly or quietly, in a harsh or soft manner, could be duplicated in a melodic line, "as if someone were expressing his emotion in the sounds which compose music…"[143] One can therefore say that a piece of music could contain the vocal expression of an emotion.[144]

Going back to the performer, one can see that by being 'musical' or by identifying with the composer, what Cooke probably meant is that the performer is asked to identify

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mean that the listener responds affectively. It is perfectly possible to be aware of the meaning of behavior without responding as though the behaviors were our own…we may sympathize with the mood of another individual without having an emotional experience ourselves." Meyer, 268. The fact nevertheless is that differentiating between real and fictitious emotions is no simple matter.

[142] Budd, 132.

[143] Ibid., 131.

[144] A question that is not addressed by Walton, Elliot or Budd is what happens when the music offers more than just one line, as is the case for example, in a symphony or in a fugue. Is one now dealing with multiple voices and therefore multiple emotional realities or perhaps with a schizophrenic composer? The palette of musical sounds might originate and heavily rely on the voice, but it surely contains much more than just a voice. The gushing sounds of a stream, the trumpets of hell, stained glass windows or birds, all exist in music and show that no composer has ever promised to create a one-dimensional narrative-like music only, or to be clear about his emotional intentions for his music at all. As a performer and a listener, one has the obligation to remain sensitive and allow the composer's intention to be carefully uncovered. Sometimes the expressive qualities of a vocal line are indeed what the composer was after (as many of Chopin's *Nocturnes* and Mendelssohn's *Songs Without Words* suggest). At other times it is more a question of an atmosphere (such as a battlefield in the case of Prokofiev's War Sonatas or a moon-lit terrace and fireworks in Debussy's *Preludes*), and more often it is a combination of the two. In some musical examples only one speaker is present, while in others there are more than one, which can represent different sides of the composer's personality or different speakers all together. As a rule, there is no rule, and performers and listeners should always be open to sudden changes in musical context, suggesting a change in the composer's intention.

the speaker's line in the music, the composer's narrative, if you will, and to identify, either by empathy, or by total immersion, with the emotions of that narrative. To Budd, the performer's task at hand is nonetheless problematic: "To hear M (a melody) as sounding much or quite like the vocal expression of E (a specific emotion) – even being struck by its likeness does not imply that one makes believe that M is the vocal expression of E. And to make believe that M is the vocal expression of E does not imply that one thinks that M sounds much or quite like the vocal expression of E…"[145] Logically, this is true. There is no fixed dictionary that says which emotion should be associated with which melody, since even in the context of the same piece the connotation could change. Budd is therefore correct in saying that the relationship between melody and emotion is not an absolute one. But then his absolutism is of no importance, since in reality, it plays no role; the likeness between the prosody of language and of music is enough to create the association and therefore the connotation between both. It does not really matter that one is not necessarily the other, that a specific melody will represent a specific emotion; what does matter is that for most of us, there is enough to cause the associative mind to link a specific emotion with a vocal line of a certain character, because of all previous examples that do so.[146]

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[145] Budd, 132.

[146] Cooke in his book gives plenty of examples of cases in which a melodic line surely represents a specific emotion. His generalizations are obviously not bullet proof, but are sufficient to show that a tendency exists nevertheless for most intervals, melodies and rhythmic features. Also, the following description of Patrick Juslin's and Klaus Scherer's experiments by Mithen shows the falseness of Budd's statement: "In 1997, Juslin published the results of two related sets of experiments, in which the music was generated by electric guitars. First, he wanted to identify how musicians themselves sought to express specific emotions through their instruments. He gave three professional musicians five different melodies to play, chosen to cover somewhat varying emotional characters in their melodic structures: 'Greensleeves', 'Nobody Knows', 'Let It Be', 'When the Saints Go Marching In', and 'What Shall We Do with the Drunken Sailor'. They were asked to play each piece in whatever manner they thought appropriate so that they would sound happy, then sad, angry, fearful, and finally emotionally neutral. The musicians were not

2.3 Three Subject Problems

The following section identifies the essential areas in which some confusion on the subject of music and the emotions still exist.

Problem No. 1: Confusion in Terminology

The first problem arises out of general terms as 'emotions in music'. One should always be identifying whose emotion one is referring to, and be aware of the possible differences. The composer's deep emotional understanding is used in the composition of a piece, the performer's emotions are used to fuel a performance, and the audiences'

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allowed to make any changes to the pitches, melodies or guitar sound. Under these restraints, they could play the piece as they wished, but they would do so with no knowledge of how the others chose to express the specified emotions. The results showed considerable concordance among the musicians, indicating that distinct styles of playing were associated with each of the intended emotional expressions. When seeking to express anger, the music was played loudly, with a fast tempo and legato articulation; for sadness, a slow tempo, legato articulation and low sound levels were chosen. Happiness was expressed with a fast tempo, high sound level and staccato articulation; fear was associated with a low sound level, staccato articulation and a slower tempo. However, identifying the manner in which particular emotions were musically expressed was just the first part of Juslin's experiment. The second was to explore whether listeners were able correctly to identify which emotion the musicians were attempting to express. For this, Juslin used twenty-four students. Half of these were musically trained; half had no close involvement with music. They were asked to listen to fifteen performances of 'When the Saints Go Marching In' and to rate each one as to whether it was happy, sad, angry or fearful. Juslin found a very strong correlation between the emotion intended by the musicians and that which the listeners believed was being expressed. Happiness, sadness and anger were all relatively easy to identify; fear was a little more difficult but was successfully recognized in the great majority of 'fearful' performances. The listeners who were trained musicians had no greater success than those without expert musical knowledge, but women had slightly greater success than men…Scherer's experiments required that any semantic meaning be removed from the words so that the emotions were expressed via acoustic properties alone. Like Juslin, he tested whether listeners could correctly identify the intended emotion. In one experiment, the voice was employed to list the alphabet or a numerical sequence, while listeners attempted to recognize what emotion it was endeavoring to express. His findings, confirming those of numerous other investigators, were that a success rate of at least 60 percent is usual, even when complex emotions of jealousy, love and pride were involved…some of Scherer's other experiments have attempted to identify the relationship between specific acoustic properties, such as pitch level, tempo, tonality, and rhythm, and the specific emotion expressed – just as Juslin did with his guitar players. The results were similar…The analysis by Cooke and the experiments of Juslin and Scherer place out intuitive knowledge and common experience of how emotion is expressed by music on a scientific and objective footing – whether the music is generated by the voice alone, by an instrument, or by a complete orchestra." Mithen, 93-4.

emotions are usually aroused by the process of empathizing. One must distinguish among the different manifestations of emotions involved, those belonging to the composer, the performer and the listeners, and realize that they are not the same, though they are obviously linked.

One more important distinction should be made here regarding the nature of the composer's emotions. In Hindemith's words, "Music cannot express the composer's feelings. Let us suppose a composer is writing an extremely funereal piece, which may require three months of intensive work. Is he, during this three-month period, thinking of nothing but funerals?"[147]

Cooke answers this question by establishing a dichotomy between two levels of emotions in the composer's life: the composer's day-to-day emotions and a deeper and more personal level of emotions. He claims that a composer does not create from the first level, but rather from the second. He then turns to Mozart for an example:

> To say that a composer writes music out of his whole experience is not to entertain crude notions of music's dependency on life – to imagine, say, that the melancholy of [Mozart's]…Fortieth Symphony was the immediate result of an influx of bills into the poverty-stricken composer's home, or that the comparative joy of the *Jupiter* arouse out of the receipt of a large loan from a friend…the Fortieth Symphony and the Jupiter are visions of the sadness and the joy of life respectively, as experienced by Mozart – not in his superficial, everyday reactions, but in his deep, enduring self…[148]

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[147] Paul Hindemith, *A Composer's World: Horizons and Limitations* (Cambridge: Harvard University Press, 1952), 35-36.

More confusion, this time in Cooke's writing, concerns the listener's emotional reaction to music and its level of intensity. Cooke explains the arousal of emotions in the listener as an empathic reaction to the composer's emotions presented in the music. He claims that listening to the *Eroica*'s Funeral March, the listener will recognize Beethoven's grief in the music, as a result of the strong associations and connotations, and will therefore empathize with Beethoven: "In the slow, heavy, dragging rhythm, the minor key, and the mournful melody, he [the listener] will recognize the type of the funeral march, and Beethoven's own individuality of expression…"[149] He adds that to some extent, the listener's ability to empathize is enhanced by his personal experience of that emotion but insists that this form of empathizing will not awaken the real emotion in the listener: "Will the music awaken 'former experience of real grief, stored up in the memory, and now portrayed in a dream-like fashion?' [Hindemith's words] Surely nothing of the sort…" Cooke sees listening as an empathic action, similar to reading a letter from a friend, but to him, the next step, the letter arousing one's own memory of grief, is not a possibility. One should use caution when assuming that the music will not arouse real emotion in the listener. Not all listeners are the same, and for the sensitive ones, empathy can arouse real memories and therefore real grief. For the performer, the emotions are real, since the task at hand is about accessing his emotions. Though s/he has the option of performing a piece out of an empathic view, as if reading a letter from Beethoven, one should argue that the performance would be more effective if s/he accessed her own sense of grief to bring Beethoven's emotional reality to life.

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[148] Cooke, 235-236.

[149] This and the following quotation are taken from Cooke, 19-20.

Problem No. 2: Specificity and Totality

The desire to have specific and complete answers to the very complex questions at hand, has led to many complications as well as faulty assumptions. For example, Cooke shares Meyer's limitations on the comprehension of connotations by people who belong to a different culture: "The investigation of musical language is confined to Europe, since if music is an international language within a given continent, it is certainly not an inter-continental language."[150] As we have seen, the answer to the question of whether one is capable of understanding connotations across cultural boundaries has dramatically changed in recent years. Recent research has shown that some associations and connotations are universal and that there are more parallels between the perceptions of emotions in different cultures, than Cooke and Meyer would care to admit. To say that all human beings are capable of understanding all possible musical connotations would be an error; to say that only Europeans could understand those of Western music, would be another.

Another example of the demand for specificity is shown in the argument against the investigation of the composer's emotional intention by saying that one will never know what this intention truly is. According to Cooke, "What Goethe, Baudelaire, and Kafka said may be valuable data for the final understanding of humanity; what Beethoven, Berlioz, and Mahler said is certainly not – simply because there is no way of

[150] Ibid., vii.

agreeing as to exactly what they did say."[151] To this one must say, as Copland did, that the lack of specificity should not be used as an excuse not to start an investigation for an emotional intention altogether.

Cooke, on one occasion, does give an example of specificity of emotional intention, which he finds in a letter Mozart wrote to his father: "Now, as for Belmonte's aria in A major – '*O wie ängstlich. O wie feurig'* – do you know how it is expressed? – Even the throbbing of his loving heart is indicated – the two violins in octaves…one sees the trembling – the wavering – one sees how his swelling breast heaves – this is expressed by the crescendo – one hears the whispering and the sighing – which is expressed by the first violins, muted, and the flute in unison'."[152] Cooke proves that specificity does on occasion exist and can be verified, but when it is not present its lack should not be used to mean that it does not exist.

A more sophisticated opposition to, as well as a description of the specificity problem is expressed by Copland:

> My own belief is that all music has an expressive power, some more and some less, but that all music has a certain meaning behind the notes and that that meaning behind the notes constitutes, after all, what the piece is saying, what the piece is about. This whole problem can be stated quite simply by asking, 'Is there a meaning to music?' my answer to that would be 'Yes'. And 'Can you state in so many words what the meaning is?' My answer to that would be, 'No'. Therein lies the difficulty…

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[151] Ibid, ix. Cooke is clearly being ironic here.

[152] Cooke is quoting Mozart in a letter to his father, Vienna, 26 September 1781, concerning *The Abduction from the Seraglio*. Ibid., 13.

> Let us suppose that you are fortunate and can describe to your own satisfaction in so many words that exact meaning of your chosen theme. There is still no guarantee that anyone else will be satisfied. Nor need they be. The important thing is that each one feels for himself the specific expressive quality of a theme or, similarly, an entire piece of music. And if it is a great work of art, don't expect it to mean exactly the same thing to you each time you return to it… [153]

This problem is also addressed by Cooke in the form of an examination of the second movement of Beethoven's Seventh Symphony.[154] In his examination Cooke clearly shows that though there is a margin of variation in one's possible titles for the variation theme, there is nevertheless a core consensus, and that some possible titles could be in direct opposition to the composer's emotional intention. This last statement is very much in agreement with what was described in Chapter 1 as the false assumption regarding the subjectivity of emotions. Indeed, each person has a subjective understanding of an emotion, but this subjective understanding is tied to a general consensus about that emotion. Cooke is stating that a margin of right and wrong about the emotional intention for a work does exist. And Copland points to the fact that there is a difficulty, in this margin, with assigning specific meaning to a musical theme, and that one has to accept personal deviations of interpretation.

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[153] Copland, 12,15.

[154] Cooke, 22-23.

Problem No. 3: The Causal Connection

The criticism against referentialists' approach to music, according to Meyer, centers around: "1. the causal connection between the musical stimulus and the referential response, 2. upon the apparent disparity between the responses of different listeners, and 3. upon the lack of specificity in the responses made."[155] We have already addressed Meyer's second and third objections in the previous sections, and therefore will deal here only with his first objection. In the words of Hanslick: "There is no causal nexus between a musical composition and the feelings it may excite, as the latter vary with our experience and impressibility."[156]

To Hanslick's claim Meyer answers: "These objections are, however, without merit…" The fact that the nexus between music and response does not always exist, or only sometimes exists is by no means to say that is never exists: "As is evidenced not only by the practice of composers within a given style but also by the responses of listeners who have learned to understand the style."[157] Again, Hanslick chooses to ignore one's ability to associate and connote with the music according to one's experience and knowledge. The difficulty Meyer finds with basing music on connotative and mood responses is:

> That in absence of a specific referential framework, there is no causal nexus between <u>successive</u> connotations or moods.

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[155] Meyer, 270.

[156] Eduard Hanslick, *The Beautiful in Music.* Translated by Gustav Cohen (New York: Liberal Arts Press, 1957), 25.

[157] Meyer, 271.

> In literature or in life, successive experiences are apparently causally connected by the sequence of events which take place between them. A depressing experience is followed by a joyful one, and the change is understood in the light of the events connecting them. But though music can present the experiences themselves, if only metaphorically, it cannot stipulate the causal connection between them. There is no logical reason, whether musical or extra musical, for any particular succession of connotations of moods.[158]

This problem, in Meyer's opinion, was what led to the advent of programmatic music: "The program is not the mere whim of the composer, an unnecessary and superfluous addition to meanings already inherent in the music, nor is it an attempt to depict moods and connotations. Its function is to connect them."[159]

Let us make this issue clear. Meyer agrees that a nexus does exist between music and the emotions through connotations, but he does not believe that another nexus exists between the progressions of emotions in music and those progressions in real life: "The musical materials and their organization are the necessary causes for a given connotation but, since no summation of necessary causes can ever amount to a sufficient cause, the sufficient cause of any connotation experienced must be supplied by the listener." It is strange that Meyer does not see that the world of arguments that he used to assert the existence of the first nexus could be used to assert this one as well. The same collective consciousness that has led to the creation of the connotations to begin with is also responsible for one's ability to understand the causal relationship between the different emotions presented in a piece. As audience members we have been conditioned by

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[158] Ibid., 272.

[159] Ibid., 272.

listening to hundreds of da capo arias, in which a contrast of emotion has been so eloquently presented, to be able also to appreciate these contrasts when they appear in instrumental music. In other words, the ability to make a direct connotation between music and a specific emotion means that another connotation can be made for the transition between them.

Cooke concurs: "The fact remains that in all our writing and thinking about music, we do most unfortunately tend to preserve the fallacy that musical form cannot function continuously as expression, whereas in fact the two things are only two aspects of another of our indissoluble unities…" and elsewhere: "The overall emotional organization of a piece of music is often quite similar to that of a poem or a drama. This can be seen clearly in the case of a song or an opera. Everyone can hear how Schubert, by the use of different types of melody, different rhythms, and subtle tonal modulations, follows the emotional progression of the poem…the conflicting emotions of poem and music follow in swift succession – restless anxiety, joyous ecstasy, a cry of pleasurable pain…" Cooke also mentions Wagner's philosophy as supporting this: "Wagner's musical construction, in such a work as *The Ring*, goes hand in hand with his verbal-dramatic construction; in fact. As is well known, they were in places conceived as one indissoluble musico-dramatic whole."[160]

In order to follow the analogy between the progression of emotions in literature and the progression of emotions in instrumental music, Cooke compares Beethoven's

[160] Cooke, 214, 28.

Funeral March from the *Eroica* Symphony with Tennyson's *Ode on the Death of the Duke of Wellington*: "My only reason for a comparative verbal analysis of the two works is to endeavor to indicate that music functions very much like poetry in making a coherent and unified statement out of conflicting emotions…music is not more incapable of being emotionally intelligible because it is bound by the laws of musical construction, than poetry is because it is bound by the laws of verbal grammatical construction."[161]

There is therefore enough data to suggest that the causal connection between the progression of emotions in a piece of music and their progression in reality does in fact exist and that the progression of these emotions is not coincidental.[162]

2.4 Conclusion

This chapter began by presenting Meyer's topography for the different positions taken by theoreticians on the question of the connection between music and the emotions. It is important to stress here again that theoreticians such as Meyer and Cooke have voiced opinions that encompass more than just one viewpoint, and hold both the referentialists' and the absolutists' views to be complementary. We have also seen that there are at least six intersections tying music and the emotions to one another, and that both composer and performer play an equal part in the arousal of emotions. Another essential point to maintain is that all involved, composer, performer or listener, share the

[161] Ibid., 30-31.

[162] The analogy between the speaker in literature and in music was discussed in the previous section in the work of the referentialists.

collective memory. This well of connotations and associations is the basis for the connection between music and the emotions, and can be used in the creation of a new piece as well as in deciphering an already existing one.

Uncovering the composer's specific emotional intention in music is not a simple task, yet it is not an impossible one either. At times the answer is clear and is inherent in the musical line or is specified by words such as 'Furioso' and 'Melancholic'. But even when this is not the case, one can usually uncover the emotional content by carefully examining the score. The intention behind the music does not always have to be clearly specified, and still a sensitive performer will be able to uncover it.

Budd implies in his book that the composer's chief intention in writing a piece of music was for it, above all, to be heard. It is hard to believe that any of the great composers became great only because they wished their works to 'be heard' and because the music they wrote was worth hearing only because it was beautiful. As a whole, we recognize that behind music lies something far greater than just a beautiful architecture, and we sense that what it is, is a higher goal; to paraphrase Tolstoy, the composer's desire is to share some of his unique experience with the rest of humanity.[163]

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[163] This idea is beautifully expressed in the following paragraph taken from Walter Frisch, *Brahms, The Four Symphonies* (New York: Schirmer Books, 1996), 35. In this paragraph Walter Frisch quotes Paul Bekker's remarks on Beethoven's symphonies and their role: "In earlier times, said Bekker, this social function had been fulfilled in music by masses, oratorios, and passions, which had, however, lost this role as organized religion declined in influence in the later eighteenth century. What Bekker admired about Beethoven's symphonies was their unique ability 'to organize the new humanity of the years around 1800 into artistic form, and thereby give to that humanity the opportunity to recognize itself as an entity capable of feeling'."

Chapter Three

The Concert Hall Equation

I cannot believe that God plays dice with the cosmos.

Albert Einstein[164]

3.0 Introduction

In order to clarify the basis for this chapter, here is a famous short fable. Three blind men were walking in the jungle when they suddenly had to stop due to an obstacle in the road. Not being able to continue, they tried to establish the nature of the obstacle and find a way around it. The first man, feeling the obstacle in front of him, said that he thought they were standing in front of a roughly surfaced wall. The second, feeling the obstacle in front of him, objected and said that they were standing in front of a thick branch, while the third man insisted that they were standing in front of a small tree trunk. Hearing the loud quarrel, a man appeared and after taking one look at the object sighted, he said: "Gentleman, it's an elephant…"

[164] Albert Einstein on quantum mechanics, published in the *London Observer*, April 5, 1964; also quoted as "God does not play dice with the world." in Ronald W. Clark, *Einstein: The Life and Times* (New York: World Publishing Co., 1971), 19.

While identifying each of the variables seems an easy enough task in itself, seeing them as one entity, or if you will, as one elephant, is a much more difficult one, making it the chief goal of this chapter. This chapter deals with the concert hall equation and variables as a whole. The word 'equation' was chosen because it incorporates both the six concert hall variables, the composer, the music, the performer, the instrument, the audience, and the space, as well as the processes that take place in between these variables.[165]

The purpose of the first section of this chapter is to create a framework for the discussion of *all* concert hall variables by using the basic principles of network science. The middle section explores some explanations of the processes that take place between these variables, while the last section is a brief discussion of the different variables and the relationships between them.

[165] In this document, the term "Concert Hall" includes smaller performance situations and venues such as private lessons and run-throughs. It does not imply a specific scope.

3.1 The Science of Networks

> Most of us feel that we do not live in such a random world – that there has to be some order behind these complex systems…
>
> Albert-László Barabási[166]

The concert hall equation is made out of six variables: the composer, the music, the performer/s, their instrument/s, the audience and the performance space. Since some of these variables have been closely examined in Chapter 2, we will start here first by establishing the framework in which they all work. In order to do so, let us go into the complex world of networks. The science of networks has become one of the essential keys to understanding the world around us. If in the past one looked at networks such as the U.S aviation system, the human cell or the World Wide Web as having very little or nothing in common with one another, one now has to face the fact that these systems operate under the same basic mathematical principles. By learning and applying the basic terminology of network science, one can start viewing old familiar structures in a new perspective.[167]

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[166] Albert-László Barabási, *Linked - The New Science of Networks* (New York: Plume, 2003), 23.

[167] In the words of Albert-László Barabási: "Now we are close to knowing just about everything there is to know about the pieces. But we are as far as we have been from understanding nature as a whole. Indeed, the reassembly turned out to be much harder then scientists anticipated. The reason is simple: riding reductionism, we run into the hard wall of complexity. We have learned that nature is not a well-designed puzzle with only one way to put it back together. In complex systems the components can fit in many different ways that it would take billion of years for us to try them all. Yet nature assembles the

The Basic Terminology

In order for us to create a framework for the concert hall equation, let us start with an example of a simple network: a dinner party. In this party, the hosts and guests are nodes, i.e. intersections. Each one of the participants can increase the number of connections he has to the other guests by simply addressing them. A network is born. A connection made between two guests is called a link and the entire dinner party can be presented as a simple graph of connections between the party's hosts and guests. Since the hosts of the party are normally acquainted with almost all the guests they will have the most links, and they therefore serve as the hubs for this network. JFK and O'Hare airports are examples of non-human hubs in the US aviation system as are the Google and Amazon websites on the World Wide Web. Each one of the smaller airports or websites is still a viable node in the network, but in order to become a hub, the number of connections necessary must be among the highest in the network.

The idea of 'success' could then be defined as one's ability to connect to as many nodes as possible, and 'successful people' could be defined as those who become the hubs of their networks. These people have mastered the ability to connect to a large number of people and in doing so have managed to increase the number of links their network has and therefore reduce the chances of failure. But what has made these people or airports hubs in the first place? Every node in a given network has a 'fitness level': the nodes' measured ability to make contacts in comparison to other competing nodes.

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pieces with a grace and precision honed over millions of years. It does so by exploiting the all-encompassing laws of self organization, whose roots are still a largely a mystery to us." Barabási, 6.

Google and Amazon became hubs because they managed to supply any inquiry with a good response in a short time and free of charge, which made their fitness level extremely high. JFK and O'Hare became hubs because of their proximity to two heavily populated metropolises. When we then apply Barabási's terminology to the concert hall equation, a clear picture emerges.[168] The hub is a complex made out of performer, music and instrument, the different nodes are the audience members, and the performance space is the location in which this network operates.

But in order to identify the more specific relationship between the audience and the performer we must answer the following question: how does one measure the distance between a hub and any of the other nodes? The answer to this question can be found in the Kevin Bacon game invented by two college students. In order to play the game, one picks a random actor and then realizes how many 'degrees of separation' there are between that actor and Kevin Bacon. All the links between the two are actors with whom both Bacon and the random actor have worked. Being a popular actor, Bacon exhibits all the characteristics of a major hub, as he has worked with many of Hollywood's finest. The number of links one has to go through before reaching Bacon is the distance between hub and node. The lower the number is, the closer the actor is to the hub. The higher, the further he is from it. What could be viewed as a simple game in Hollywood trivia turns out to be a mathematical principle. A network is a construction made out of hubs and nodes that are linked to one another in varying levels of separation. When we now go back to the concert hall equation we see that each and every audience

[168] The application of network science to the concert hall equation is not discussed as such by Barabási. The application of his terminology to the concert hall equation is done by this author.

member is once removed from the artist (the network's hub), assuming each one of the audience members in the hall is capable of seeing the performer and hearing the music.[169]

Another important determination to be made when studying any network is whether the network is directed or non-directed. A directed network is one in which navigation between the links can only occur in one direction, and its links are therefore called directed links. For example, one can search Google for a specific artist and find her homepage, but the homepage will not have a link back to Google. One could navigate back to Google by hitting the back arrow, but in order to determine whether a network is directed or not, the navigation between the links must occur inside the same network, meaning on the artist's homepage. A non-directed network, on the other hand, allows one to navigate back and forth from one link to the other. Examples of this will include a dinner party network where conversation flows between the guests or the aviation system, where travel is possible among any of the nodes.

The concert-hall network can be viewed as a directed network, since the music does move from the stage to the audience and not the other way around. At the same time, it can also be viewed as a non-directed network, since it can allow for links to be made in more than just one direction. The relationship between audience and artist is a two-way street: on the one side music is being directed to the listener, and on the other side attention (visual and audio) is being directed at the performer. If we take into

[169] The importance of this fact will become clear when we discuss the specific network model of the concert hall network.

account the audience's attention we can say that the concert hall network could be viewed as a non-directed network.

The first model attempting to explain the mathematical principles behind networks was presented by Paul Erdös and Alfréd Rényi and was called **'The Random Network Model'**[170]. Since it was the first successful attempt at dealing with the mathematical principles in networks, this model is still the foundation for the basic terminology we use today. At the same time, this model was based on two faulty assumptions. The first was that the number of nodes in a network stays the same during the network's lifetime, and the second was that the 'fitness level' of all nodes in a network is identical. These faulty assumptions led Erdös and Rényi to make the faulty claim that the existence of the hub was impossible.[171] They simply did not acknowledge two important facts. The first is the rule of **Growth**[172]: a network is in a constant state of fluctuation. It is born and it will die, and it is most definitely not static. Hubs are going to rise and fall with varying speeds and they cannot and will not exist forever. The second rule is that of **Preferential Attachment**[173]: some nodes are better than others, and therefore will have better chances of connecting than their competition. With these two rules in mind we can now mathematically prove the existence of hubs in a network. This

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[170] Barabási, 47-53.

[171] The existence of hubs is in complete contradiction to the Erdös and Rényi model. If all the nodes in a network are similar and have the same fitness level there would be no mathematical explanation for the existence of hubs in a network. The web is sure proof that their assumption was incorrect since in this network we can clearly see preference of some nodes over others.

[172] Barabási, 86-89.

[173] Ibid., 96,183.

is also true in the case of the concert hall equation. The rule of growth can be viewed in the duration of a concert. A concert starts with no links between the audience and the artist but with the first notes the population of the hall will become connected to the performer.[174] As for the preferential attachment rule, one could say that if Aunt June has a heart attack during a concert, she will 'steal' some attention and several nodes from the performer; but in general, audience members choose to connect to the artist on stage, and except for a few coughers and cell phones users, the concert hall network offers little competition to its performer/hub.[175] The new model incorporating these two rules was created by Barabási and his team and is called the '**Scale-free Network Model'**[176].

To view the concert hall equation as a network and the role of the artist as a hub percolating music and emotion is not earth-shattering in itself. The analogy is simple and the similarities immediate. But, as Barabási stresses, what is indeed earth-shattering is that these similarities between networks are not random or coincidental and by using the network rules and conditions we open a whole new terminology for the discussion of artistic performance. Also, viewing the concert hall equation as a network offers a solution to one of the most basic problems faced by artists, audiences and music educators in teaching, understanding and listening to music. Instead of continuing to do what comes so naturally to us, 'riding reductionism' and focusing on each of the variables by itself, with the terminology network science offers us, we can concentrate on

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[174] This is an organic process; not all members of the audience are going to link to the performer at exactly the same moment. Some may choose to connect at different times or during different pieces.

[175] Of course in comparing one artist to another, a very clear picture of preferred 'hubs' emerges.

[176] Barabási, 87.

the connection among all the variables and identify the processes that take place, the percolation of emotion being one of them.

Having familiarized ourselves with the basic terminology of network science, we can now turn to examine the processes that take place in a network. For example, the aviation system allows people to travel from one place to another. What moves between the hubs and the smaller nodes are people traveling. In the case of the World Wide Web it is our attention that travels from one page to another through invisible channels. This attention or motion though a network is called **Percolation.**[177] A computer virus that penetrates the general computer network is percolating its damage through millions of nodes. The AIDS virus does the same through the human network (the people who were infected and had unprotected sexual relations served as important hubs in the spread of the disease.) During a concert, the performer is percolating music. And if s/he also chooses to establish an emotional reality on stage, s/he will percolate much more then just notes. S/he will percolate emotion.

[177] Ibid., 18-19.

The Concert Hall Network, a Specific Case

But there is another problem we have yet to address, and that is the existence of only one hub in the concert hall equation. Though made out of three parts (performer/s, music, and instrument/s), this complex makes for one hub only, one which has no competition in the actual concert hall (again, we are not discussing here the natural competition between different artists in the general network of the music world, but the specific event of a performance.) As we saw before, networks usually have several large hubs and subsequent smaller ones in their overall structure. None of them could fully function with only one hub working.[178] Therefore, some adjustments must be made when discussing the concert hall equation as a network to account for this discrepancy. In order to do that we will have to turn to a more specific network model based on the **Bose-Einstein condensation**.[179] This principle explains a different form of making links between the network's nodes, and one that puts only one hub at the center of a network. In order to understand how this might be possible, let us go back to the Hollywood actors' network.

A budding actor starts out with relatively few links to his fellow actors and to the general public. As his career grows this fact could drastically change. With one hit film, our actor can suddenly multiply his connections in the business as well as with audiences. He now has offers to act with other leading actors, and the newspapers might just start

[178] For example, try to imagine the US aviation system with only one major airport.

[179] Barabási, 99-107.

saying that a new star is born. He has become a hub. He is now getting more movie offers than before and the more movies he makes the more offers he receives. But at one point will our actor become the only hub in his network? Could we imagine our actor becoming the only working actor in Hollywood?

As we have seen before, there is a reason why some nodes receive more links than others. Their fitness level is simply higher than that of the competition. For example Compaq, Dell and IBM each have a slice of the computer hardware market at 13%, 11% and 7% respectively.[180] From this we can surmise that there are three major hubs in the computer hardware network and that all three have a high fitness level. Our actor is in a similar situation, though he is now one of the important leading men in Hollywood, he is still not the only successful actor in LA and competition will always be breathing down his neck. This is not the case when it comes to Microsoft. Nobody is breathing down its neck. Even though there are other computer software systems operating in the market, Microsoft has managed to secure 86% of the market to itself. As we have seen in the previous examples, in most networks subsequent hubs must exist and are going to be very close by. No network can grow with only one hub. It will naturally create the conditions for several hubs to emerge. Something else must have operated on the software network to allow Microsoft to become in effect the only existing hub. This "something else" is explained by a principle called the Bose-Einstein Condensation. If and when a network is subjected to certain critical conditions, such as an extreme temperature, it will start behaving differently. It will unite in a cluster around one preferred node. These extreme

[180] These numbers and the following information appear in Barabási, 105.

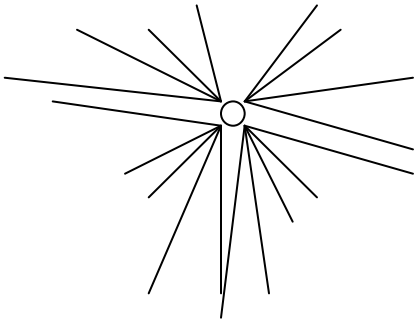
conditions are very low temperatures in the case of gas, financial conditions in the case of Microsoft, and in the case of the concert hall equation, being stranded inside a concert hall for a set amount of time. Under these extreme conditions the nodes reunite around one hub, and for our purposes, the performer.

We start the performance with hundreds of people who are not connected to one another, but that, due to the extreme conditions of a performance, will become a cluster:

> Physicists call it percolation and will tell you that we just witnessed a phase transition, similar to the moment in which water freezes. Sociologists would tell you that your subjects had just formed a community. Though different disciplines may have different terminology, they all agree that when we randomly pick and connect pairs of nodes together in a network something special happens: The network, after placing a critical number of links, drastically changes. *Before*, we have a bunch of tiny isolated clusters of nodes, disparate groups of people that communicate only within the clusters. *After*, we have a giant cluster joined by almost everybody.[181]

To connect each and every audience member to all the other audience members would take a long time. But because of the extreme conditions posed by a performance and because each audience member is only once removed from the performer, a cluster is formed. There are now only two degrees of separation between each and every audience member. This process is also referred to as the "Star Typology" because of the shape of its graph.

[181] Ibid., 18.



Graph 1:

The Star Typology[182]

In this graph we find one central node, the performer complex, which is connected to all of the other nodes. The point where the performer complex and audience become one is similar then to the point when water changes from separate floating molecules into ice.[183] We have seen that the concert hall equation can be viewed as a network of a specific structure and topography. It puts the performer complex as its hub to which audience members are linked.[184] Let us now take an even closer look at the processes that take place in this network.

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[182] This graph is based on Paul Baran's centralized network graph. Paul Baran, *Introduction to Distributed Communication Networks,* RM-3420-PR. <http://www.rand.org/pubs/research_memoranda/2006/RM3420.pdf>

[183] It is important to remember that every audience member sees and hears the performance separately and in a different way than the person sitting next to her. There is no apparent exchange between members of the audience with one another (except perhaps in the intermission or listening to each other's coughs). Yet something quite unusual happens in a performance as the audience unites around a performer. "The most important prediction…is that some networks can undergo Bose-Einstein condensation. The consequence of this prediction can be understood without knowing anything about quantum mechanics: it is simply, that in some networks *the winner takes it all*. Just as in the Bose-Einstein condensate all particles crowd into the lowest energy level, leaving the rest of the energy levels unpopulated, in some networks the fittest node could theoretically grab *all* the links, leaving none for the rest of the nodes. The winner takes it all." Ibid., 102. For more information about how did the parallel between the Bose-Einstein condensation and networks science evolved, see Chapter Eight in *Linked*.

[184] The Bose Einstein condensation phenomenon is also described by Mithen (who is paraphrasing McNeill), but using a slightly different terminology: "McNeill is keen on the notion of 'boundary loss' – the manner in which group music-making leads to 'a blurring of self-awareness and the heightening of fellow feeling with all who share in a dance.' The origins of such feelings, McNeill argues, lie in our evolutionary past, 'when our ancestors had danced around their camp fires before and after faring forth to hunt wild and dangerous animals'. Those individuals who practiced the hunt and enhanced their levels of coordination via

3.2 The Concert Hall Process

In Chapter 1 and 2 we have identified the reaction to stimuli, empathy and the 'primary process' as some of the basic processes which take place during a performance. The following section examines these processes from a slightly different perspective.

According to Wagner

A good place to start this discussion is with Wagner's *Parsifal*, since this opera offers both a metaphor and a religious explanation of the roles of both art and artist. *Parsifal*'s plot revolves around the unveiling of the Holy Grail, a source of nourishment to the knights of the enchanted forest. The person responsible for the unveiling of this power is Amfortas. Only he can hold the Grail and allow its hidden force to work its magic onto his fellow knights. But what is the force that is contained in the Grail that is so purifying and that gives one such nourishment? *Parsifal* serves as a wonderful metaphor to the role of art and artists. Art in general and music in particular, could be viewed as Holy Grails, containing an energy that can give both everlasting joy and relief from pain. The artist is Amfortas, the person who takes on the duty of uncovering this energy, by creating and holding up the Grail. What happens during a performance is perhaps analogous to what takes place during the unveiling of the Grail. What travels in the space of the concert hall network from the stage to the audience is perhaps akin to what powers travel from the Grail to the knights. What lies in the space in both cases is

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dance would, he suggests, have been reproductively more successful, leading to the genetic transmission of their capability…" Mithen, 209.

the magical and healing energy of God. One can accept this as a simple metaphor or as a religious explanation to the basic question at hand. In the case of this specific opera, Wagner wanted the religious effect of both story and music to reach his audience not only as regular and neutral audience members of an opera, but also as active participants in the religious ceremony which is taking place on stage. It was as if he wanted the effects of the Holy Grail not to stop at the stage line, but to go further into the hall and reach his audience as well. In the words of Michael Heim: "Wagner shaped the drama with story and music so that strong sensations would engulf the audience and pierce them to the heart. Each listener begins as a naive spectator and is then gradually touched by the painful actions on stage until the listener becomes transformed into a more sensitive and compassionate member, ready to bring to a sick society some measure of healing and renewal."[185] The original reasoning behind using *Parsifal* as an explanation for the concert hall process was the innate compatibility between the variables of the concert hall equation and the images presented in the opera. It was only at a later stage in research, that it became clear that the analogy between the role of Parsifal as a character in the opera and the role of the artist in general, as stressed in this document, runs far deeper.

At the root of the opera one finds Parsifal's quest for wisdom which one is told could only be acquired through compassion. In Derrick Everett's words: "…The key to obtaining this wisdom is fellow-suffering or compassion: *mitleiden leidvoll wissender Tor*, Wagner wrote in the prose draft. In Schopenhauer's ethics, it is compassion that is the foundation of morality. From compassion follow the virtues of justice and loving-

[185] Michael Heim. *The Metaphysics of Virtual Reality* (New York: Oxford University Press, 1993), 109-128.

kindness, and from them all other virtues…"[186] Everett continues: "…Only after he [Parsifal] has understood what the Grail represents and why Amfortas suffers, through his faith and by paths of suffering…only then, by the wisdom gained through compassion or fellow-suffering, is he able to heal."

Compassion, according to the *Merriam-Webster Online Dictionary,* is defined as one's: "sympathetic consciousness of others' distress together with a desire to alleviate it…" We can also view it as a more specific form of empathy, which in this case, revolves around another's pain. Wagner is perhaps telling us through *Parsifal*'s libretto and music, that the way to obtaining wisdom is to learn how to empathize with others, and that drama and music can serve as facilitators for achieving compassion.[187]

[186] The author of these and the following lines is most likely Derrick Everett, who is also responsible for the large collection of essays on *Parsifal* in: Derrick Everett, *Monsalvat – the Parsifal Pages*, 22 May 2006, 23 April 2006, <http://home.c2i.net/monsalvat/progress.htm>. He adds: "Wagner shows us a young man growing in compassion, from the first inarticulate stirrings of compassion for the dead swan (Parsifal cannot find words, so he shows his remorse by breaking his bow), through his evident sympathy for the suffering Amfortas (Parsifal presses his hand to his heart) and his remorse for the suffering that he had caused his own mother, to the compassion for Kundry that he is able to express after experiencing her kiss…Originally, it would seem, Wagner had introduced Kundry's kiss as the mechanism by which Parsifal would be awakened to an understanding of the suffering of Amfortas (with all that it entails); he would understand by an emotional identification after reliving what had happened to Amfortas…"

[187] It is important to stress here that empathy is aroused in this case not only by the libretto, as is commonly assumed, but by the music as well. The music in this opera serves as another tie to the events taking place on stage and without it, the connection of the audience to the drama would be quite different.

Aristotle's Catharsis

Most of us are familiar with Aristotelian concept of catharsis in drama. As the *Oxford English Dictionary* defines it: "The purification of the emotions by vicarious experience, especially through the drama…" In his *Poetics* Aristotle explains the benefits of viewing a drama as the ability to empathize with the occurrences on stage and the resulting process as purifying the body from excess negative emotions. Today we use catharsis as a psychological term as well: a technique used to relieve tension and anxiety by bringing repressed feelings and fears to consciousness. The question is then could this process take place while we listen to music as well? Taking into consideration the information presented in Chapter 1 (from Freud's definition of the associative mind through the crucial role the mirror neurons play in our brain by establishing empathy to Mithen's explanation of the origins of music), we should have sufficient cause to accept music as yet another cathartic form. Music and drama are not so very different. The listener capable of using her associative mind and empathizing with the music can release negative emotions and experience a wider range of positive emotions, as s/he would during a play. But with music s/he also has the added benefit of not having a specific dramatic event associated with these emotions, but a much freer associative environment. One can therefore identify one of the processes taking place in the concert hall as a cathartic process.

3.3 The Concert Hall Variables

We have seen that the concert hall equation is in fact a network operating under extreme conditions. Audiences are linked to the musician/instrument/music complex by aural, visual, and emotional connections, and under the extreme conditions of a performance, can form a cluster. In this cluster a catharsis or an emotional transformation occurs. The expression of emotion and its release allow for new energy to flow through the body and for old emotional blocks to be removed. One might experience this relief as crying or laughing or maybe in the form of the more familiar term 'goose bumps'. With this explanation in mind, let us examine the concert hall variables in a little more detail. For the sake of discussion we will separate these variables into four layers.

The first layer includes the composer and a piece of paper or nowadays a computer screen. Music is being put on the page. But where does this music come from? Is it solely the creation of the composer? Or perhaps, is it a combination of both the composer's unique style and a mysterious unknown? One must factor 'inspiration' into this layer. For some composers the unknown means improvising at their instruments until they hear something that catches their attention. For others it means a walk in the woods. (Brahms was frequently quoted to have heard music in his daily walks through the forest.) For the purpose of this discussion we will refer to this phenomenon as the

unknown. Something which refuses definition yet is in the works. The variables in this layer are therefore the composer, the music and the unknown.[188]

The second layer introduces two new variables: the performer and her instrument. As the performer releases her energy, i.e. her emotion, thoughts and physical motions, (which are a result of the music s/he has assimilated), into the instrument s/he in turn receives sound waves. This circle between the performer's intention and the instrument's sound waves is at the root of every performance. But one must not forget that this layer also incorporates the unknown factor as well. As the performer practices the piece, ideas come in and out of consciousness. Images, options and understandings are always afloat. In this second layer or, if you will, in this incubation period, the piece becomes one with the performer. Through the act of practicing and memorizing a work, the performer/instrument/music complex is created and the separate variables become indistinguishable from one another.

The third layer takes place in the concert hall. We now add to the existing variables a new one: the audience, and more importantly, the audience's attention. This attention now allows for a new process to take place: catharsis. As we saw with the Bose-Einstein condensation, the audience and the performer become one in this network because of the emotional reality created onstage. Add to that the attention of the

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[188] "I sit at the keys, seldom hearing any melody until I move my fingers across the keys and hear the melody locked within them…the act of sitting down to the keys or to the lined page, the physical position of readiness, seems to cue the stream of thoughts to come forward now. I think the stream is always there, a current into which I tap at will…we are the portals that allow that entrance to take place. Composers more than writers tend to acknowledge that music comes to them from a higher source of inspiration, that they are the gateway and not the source…" Julia Cameron, *The Sound of Paper* (New York: Tarcher/Panguin, 2005), 30-31.

audience members and one has sufficient tension for an emotional transformation to occur.

The fourth and last layer allows the variables to separate. The concert is over. The music may be still resonating in the audience's heads, but cannot be physically heard any longer. The performer has 'given birth' to an interpretation, the performance has ended and the audience was moved and transformed.

As we saw in Chapter 1, dealing with one's emotions is a complicated matter, as one might be blocked in some avenues and not in others. But during a performance the difficulty of dealing with emotions can be avoided, since the listener is not obliged to identify the emotional reality as her own, but can identify it as the composer's/performer's and can therefore allow herself to connect to the emotional reality without the danger of being overwhelmed. Since we have already seen that emotions act as magnets it is no surprise that the emotional reality on stage is shared by almost all who are present.[189] It is important to note, though, that emotional transformation will not always occur. Among the derailing factors one can find out-of-tune instruments, resentful audience members, bad hair days and the lack of creativity and talent in performers. Talent is very much like uranium. In order to create a nuclear reaction one needs large quantities of it.

[189] This fact can also serve as a good explanation for why live concerts are so radically different from commercial recordings.

Chapter Four

The Method of Emotional Understanding of Music

> But one must throw oneself into the affect to be expressed and apply and execute in certain good style all the ties…in practicing, every care must be taken to find and render the affect which the composer wished to have brought out; and as sadness often alternates with joy, each must be carefully depicted according to its kind. In a word, all must be so played that the player himself be moved thereby.
>
> Leopold Mozart[190]

4.0 Introduction

Whether one chooses to follow the explanations of the biologists, the absolutists, the referentialists, or incorporate all of the different perspectives, one must at this juncture accept that music and the emotions are very closely intertwined. We now shift from the overall discussion to the more practical and personal world of the performer. As we have seen, the performer acts as one of the most important and most neglected intersections between music and the emotions. Her role is of vital importance both in presenting the music's structure and in sharing the composer's emotional intention with the audience. As such, the performer should take an active position on the subject of music and the emotions, and not remain a passive bystander.

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[190] Leopold Mozart, *A Treatise on the Fundamental Principles of Violin Playing.* Translated by Edith A. Knocker. Second ed. (New York: Oxford University Press, 1985), 216-218.

The performer faces many challenges. These include identifying the emotional intention, the character of the piece, the speaker in the music, and understanding the general connotations the music arouses. It is also helpful to know some of the more personal associations the composer might have had. This chapter presents one possible route for the performer to address these challenges. By using the five steps of the Emotional Understanding of Music Method, s/he will arrive at a clear set of performance decisions regarding the communication of the emotional intention of the composer. Later on, in Chapter 5, this set of decisions will be contrasted with the important structural decisions the performer should make as a part of her interpretation. Then we will be able to identify possible ways in which the performer could merge both emotional and structural decisions in performance.

The Performer's Role

If one chooses to follow the writings of Meyer, Cooke, Mithen, Horning and Freud, one would realize that it is quite possible for any knowledgeable and sensitive musician to uncover the composer's emotional intention behind a piece by examining its structure and investigating probable interpretations based on the music's connotations. One realizes that the performer could learn how to use the collective memory to assist her in uncovering the composer's emotional intention: (1) by realizing the connections between the specific piece and another piece which is set to a text by the same composer; (2) by looking at the motion in the piece and its resemblance to human emotions; and/or (3) by identifying the emotional implications of the melodic lines in it. By using the

same tools, the performer will also be able to uncover the causal relationship between the different sections in the piece, and as a result fully express the emotional content which is at the root of the composition.[191]

The performer must realize that it is her responsibility to decipher Beethoven's emotional intention behind the music, whether it be a cry of joy or a cry of agony, and that it is also her responsibility to express these emotions to the audience by adding her own unique experience of them to the performance.

Emotion, as we have seen in Chapter 3, is the glue that holds the entire concert hall network together. Therefore, there are two planes the performer must deal with. In the first, s/he must produce the piece to the extent of her technical abilities, playing the notes as closely as s/he can to match the composer's score. In the second plane, s/he must realize the emotional motivation that has led the composer to write those specific notes, and communicate this motivation. S/he now accesses the same deep personal level from which the composer created, and produces the notes from her own parallel emotional core.[192]

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[191] Obviously not every piece will be constructed on the basis of an emotional conflict. Some will revolve around the presentation of only one emotion.

[192] Copland speaks about three planes, which are very similar to the two planes presented here, from the perspective of the listener: "In a certain way we all listen to music on three separate planes. For lack of a better terminology, one might name these: 1. the sensuous plane; 2. the expressive plane, 3. the sheerly musical plane." Copland, 9. Copland's musical plane is similar to the first plane presented here, and the expressive plane to the second plane. The difference in order stems from the perspective. Copland speaks about the listener, not the performer.

The Gap in Music Education

All described above would be well and good if the performer lived in a perfect world. Unfortunately s/he does not. The ideals of the classical music world have dramatically shifted in the past decades mainly due to the new standards created by edited recordings and by the prevalence of competitions in the classical music world.[193] As a result of both recordings and competitions, both technical and stylistic accuracy have become the new ideals, while the ability to communicate emotions in music and generate the work's musical catharsis have become secondary. Accuracy and authenticity are indeed critical to one's performance, but that is only if first the music's emotional and structural essences are maintained and communicated. Performers end up worrying about the outer shell of the music, and turn their backs on what their true role as performers should be – facilitators of catharsis. As a result of this shift in ideals, priorities have become also skewed in musical education. Music students and young performers are usually first taught technique: how to accurately execute the notes as closely as humanly possible to the composer's notation. Structural understanding tools are only introduced at a much later stage, and their application towards the performer's interpretation is rarely discussed.[194] To this, one should add that there is very little in terms of an organized

[193] More on the recording world effect see Alex Ross' article: Alex Ross, "The Record Effect," The New Yorker, 6 June 2005. See also: Norman Labrecht, *Who Killed Classical Music?* (Secaucus, New Jersey: Carol Publishing Group, 1997).

[194] It is interesting to note however that in the educational systems of former Soviet bloc countries, structural understanding tools such as harmony and counterpoint studies, are taught from a very early age.

method that could help students understand the relationship between music and the emotions.[195]

The skewed priorities in music education reflect the more fundamental problem of diminishing the performer's role. How is the performer going to truly realize this role when s/he is continuously taken out of the concert hall equation by those s/he values the most: the great composers, teachers and leading thinkers in the field? One example of this attitude can be found in Hindemith's writing:

> Even if performers of any kind – singers, players, conductors – were actually the demigods that many of them want us to think they are and some of them believe to be, in reality they are, in respect to the current that flows from the composer's brain to the listener's mind, nothing but an intermediate station, a road-side stop, a transformer house, and their duty is to pass along what they received from the generating mind. Although our system of notation can give them no more than an approximation of the composer's intentions, they are supposed to understand his written symbolism and by means of their own interpretational liberties…add merely what is the minimum requirement for a realization of the composition in sound. The ideal performer will never try to express his own feelings…[196]

The objective of the Emotional Understanding Method is therefore threefold: to help the performer realize her role in the creation of the piece's emotional reality on stage, to enable her to communicate this reality to the audience, and to allow the musical

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[195] The one occasion where the student might explore both structural and emotional understanding of music is the weekly one-on-one instrumental lesson. He could also study these subjects on his own. One book that discusses both structure and emotion for performers is Boris Berman's book: Boris Berman, *Notes from the Pianist's Bench* (New Haven: Yale University Press, 2000).

[196] Paul Hindemith, *A Composer's World: Horizons and Limitations* (Cambridge: Harvard University Press, 1952), 37.

catharsis embedded in the music to take place, while at the same time remaining faithful to the music's structure.

One might argue that a method such as this is redundant since inspiration and/or talent are not subjects that can be taught. But the purpose of the Emotional Understanding Method is not to teach inspiration, but to help the already sensitive musician clarify what s/he intrinsically knows about the emotional content of the piece. As we have seen, the existence of associations, connotations and at least six different intersections between music and the emotions, should be issues that the sensitive musician investigates.

The Emotional Understanding Method is also designed to help with the challenge of being expressive under pressure**.** When one is practicing in the comfort of one's own home, one naturally connects to the music and the embedded emotions with little or no difficulty. Problems usually arise when one is not in one's living room anymore but is on stage. It is then that notes become jumbled; finding the thread of inspiration seems impossible and fear takes over. It is at this time that the performer's role is most at risk. One learns how to cope with the ravages of pressure by practicing technique and by practicing one's structural decisions over and over again. Why then does one not practice one's emotional understanding of a piece as well? It is possible that in order to do so, one needs a technique and a terminology.

4.1 The Origins of the Emotional Understanding Method

> But when precision is divorced from emotion it can become anti-musical, inhuman, repulsive...
>
> Alex Ross[197]

Background

It is important to clarify that the Emotional Understanding Method was not only developed out of the need to solve the problems with music education and reverse the music world's skewed priorities, but also out of a very simple and immediate need. The method was developed out of the joint work I have done with Dr. Einat Fabrikant, a first class musician and pianist, whom I first met six years ago. At the time I was working as an assistant to Dr. Yoheved Kaplinsky, my teacher and the chairperson of the piano department at The Juilliard School, from whom I have learned the principles of the Taubman Technique, a technique focused on treating hand injuries.[198] When we first met, Dr. Fabrikant was suffering from chronic pain in her arms and had come to study the principles of the Taubman Technique with me. Learning the new technique proved to be the simpler stage of our journey.

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[197] Alex Ross, "The record effect," The New Yorker, 6 June 2005, p. 100.

[198] For more information in the Taubman technique see: *The Taubman Institute*, 29 June 2006, <http://www.taubman-institute.com/html/home.html>

We soon discovered the negative aspect of learning this technique. Though after she mastered it, Dr. Fabrikant's arm pain was substantially reduced and she found that she was able to control the piano with much more ease and confidence, she nevertheless had to face a more troubling reality: the natural connection between her body, emotions and piano had been broken. It seemed that because of the change in technique, Dr. Fabrikant had also lost the intrinsic natural connection to the keyboard. And she was not the only one who suffered from this syndrome. I did too. Dr. Fabrikant and I soon realized that reconnecting our hands to the music and to our talent was a mutual problem and so we embarked on finding a solution.

The method's principles were first developed in collaboration with Linda Joyce, an acclaimed New York therapist and writer. Though Ms. Joyce had no background in music, her uncanny ability to observe and analyze an issue, has allowed for the method to be created. The three of us together were searching for ways to realize the full potential of human emotions in performing music, while still adhering to and not abusing the music's structure.

We understood that the reasons for many hand injuries were performer's blocked emotions, encountered in the music but then suppressed. We therefore ventured into making this relationship conscious. It was mostly a trial-and-many-errors expedition, which overall took three years. With the aid of both Ms. Joyce and Dr. Fabrikant, I have

experimented with the method until it finally settled into the general application presented here.[199]

The Basic Assumption, a Review

Let us review the basic assumption that was put forth at the outset of this document. The ideal performance stands on three pillars:

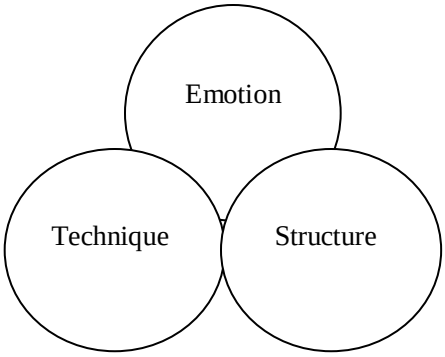
1. Emotion: The understanding of the composer's emotional intention and the emotional content of a piece and the ability to convey it to the audience.

2. Structure: The understanding of how a piece of music is constructed harmonically, melodically, rhythmically, etc.

3. Technique: The understanding of how one should manipulate the instrument to create the desired sounds under pressure and with as little pain as possible.

While each of these pillars is important in its own right and follows a different and separate set of principles, it is clear that during a performance all three will merge into one. If the performer understands how the music is constructed and makes conscious structural decisions in her interpretation, if s/he knows what emotion the composer is expressing and can express it herself, and if s/he possesses the best technical tools to do so, a clear and balanced performance should emerge.

[199] In doing the research for this document (and after the method was already completed), I was surprised to find that Deryck Cooke has created something quite similar to the method presented here in one of the sections of his book. The main difference is that his is a specific case concerning the second movement of the *Eroica* Symphony, and this method is a general application. To view his analysis, see: Cooke, 31.



4.2 The Method's Principles

I play only what I feel I can identify with…

Richard Goode[200]

According to the basic assumption, one of the performer's goals is to give a performance in which a definite position has been thought out with regard to the work's emotional content. One possible way of achieving this goal is by using the Emotional Understanding Method.[201]

[200] David Murray, Interview with Richard Goode. Financial Times, Monday December 6 2004.

[201] One cannot stress the following point enough. There are clearly more ways than the one presented here for reaching a solid footing in each of the proposed domains. This method should be taken as one option, not as the only option.

The method is constructed in five stages, each revolving around a basic question:

1) What are the piece's overall emotional connotation and association?
2) What are the emotional connotations and associations for the different sections of the piece? How do these sections relate to one another?
3) How much emotion does the performer need to express in a section? What are the boundaries and how should they be maintained?
4) How can the performer connect between the emotional content of the piece and her emotions?
5) How can the performer practice detachment and guarantee that s/he will not be overwhelmed by the emotions in the piece?

In the method's first three stages the performer is uncovering the emotional content of the piece. This content is a composite of the composer's emotional intention, stylistic conventions, common connotations and the performer's personal associations with the music. With each stage another layer of the piece is revealed. It is a continuous process of questioning and discovery, which should be continued until the performer has reached the piece's inner layer, i.e. the basic emotional conflict.[202] The other two stages of the method are designed to help the performer communicate the emotional content to the audience. It is important to note that this is not a rigid method and that the performer can at any given point use only a few or just one of the stages.[203]

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[202] The similarities between Schenker's method and the Emotional Understanding Method are fairly clear here. One such similarity is obviously the idea of outer, middle and inner layers in a piece of music which exists in both methods; though in the case of the former it is a discussion of the structural layers and in the latter it is a discussion of the emotional ones.

The First Stage: The Emotional Embrace[204]

The emotional embrace is a general definition of the emotional content of a work. According to Budd: "It is clear that an emotional characterization of a piece of music – as joyful, triumphant, mournful – can be correct and it can be incorrect. Furthermore an incorrect characterization can be indicative of a failure of appreciation of the music…"[205] Even Budd agrees that an overall emotional connotation is possible for a piece of music, and admits that an emotional identification of a piece of music could be potentially true or false.[206] Both performers and listeners may in some cases be incapable of identifying the emotions in music properly.[207] In trying to minimize the misidentification of the work's character, the performer is asked in the first stage of the method, to identify the general emotional character of the piece by realizing the music's basic connotation. Described in a sentence or a word, this general definition should give inkling as to what the general emotional content of the piece is.[208]

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[203] Several readers of this document have remarked that one might miss understand the narrative of the following sections. The reason for the detail and step-by-step description here is to give a general overview of the method and should *not* be interpreted to mean rigidity in its execution. The performer should feel free to extract whatever stages or tools from the method s/he feels would be helpful to her and skip those s/he feels are unnecessary to her.

[204] The reader is advised to consult the Graph 8 on p. 157 as s/he reads through the method's different stages.

[205] Budd, 70.

[206] It is important to keep in mind that when discussing a piece of music here we are referring to a piece of music that is written in the Western tonal music tradition. Atonal music, some impressionistic works, and a significant amount of contemporary music will be more difficult to characterize.

[207] According to Cooke, "Could it not be that some listeners are incapable of understanding the feeling of the music properly?" And he promptly answers: "Yes". This same question could be easily posed to performers: could it be that some performers are incapable of identifying the emotions in music properly? Cooke's answer might hold true here as well. Cooke, 21.

Just a reminder of what has been already discussed in Chapter 2: musicians walk the fine line between facts and serious guesswork. If one, for example, is performing Liszt's Dante Sonata or Mussorgsky's *Pictures at an Exhibition*, an absolute identification of the emotions is possible because of the programmatic content of these works. But with the so-called 'abstract' works or pure music, the performer's connotations and associations are the main key in deciding what emotions are at play. As a part of this serious guesswork, one should consider clues left by the composer in sources such as correspondence, manuscripts and first editions. In some cases the composer might have left a clear identification of the emotions by scribbling something on the score or in a letter. Brahms for example, in a conversation with Rudolf van der Leyden, said that the Three Intermezzi Op. 117 were "Drei Wiegenlieder meiner Schmerzen", three lullabies of his pain.[209] This comment is a critical clue in identifying the emotions that are at play in this work.

The emotional embrace is then the basis for the performer's emotional understanding of the work and is represented by a circle in the method's graph.[210] These general definitions might be: 'a tender lullaby', 'an angry monologue', 'a painful realization' or 'a peaceful dream.' As one can see, the objective here is not to find the best literary description for the music's emotional content, but find a simple coherent

[208] If one is having trouble with finding a satisfying definition, finding the definition can be also be done by the process of elimination, by simply asking what the piece is not about.

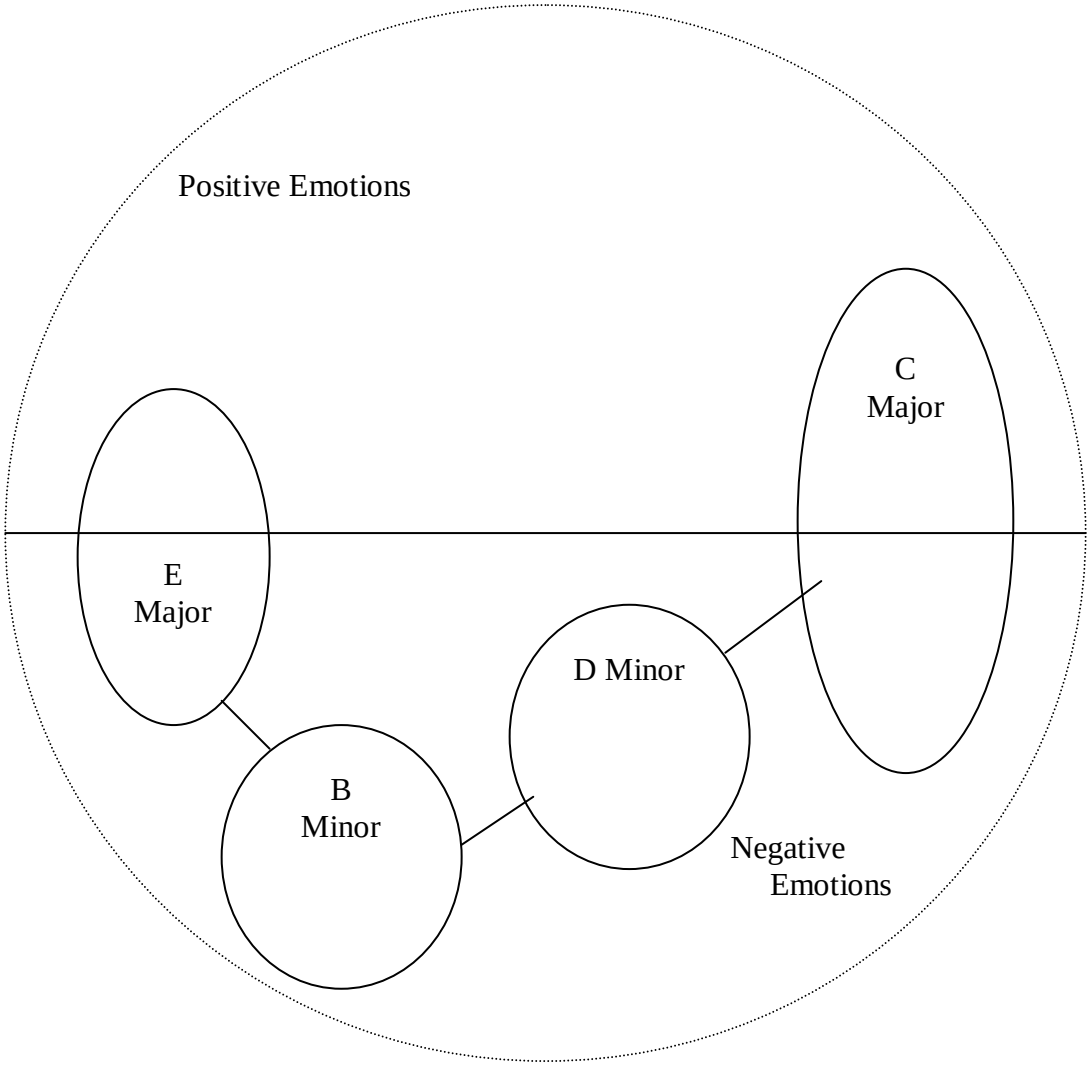
[209] This important information appears in Hans-Christian Müller's preface to: Johannes Brahms, *Three Intermezzi Op. 117* (Wiener Urtext Edition, 1973).

[210] To view an example of this stage in a graph, see Graph 8 on p.157.

label that would help with establishing the emotional parameters of the work. It is important to remember that the performer's first definition might not be the one best suited for the piece and that this definition could change with time and practice. The first definition then should not be taken to mean the last, as the entire method should not be understood as an 'instant interpretation' tool, but as a process in which continuing adjustments and readjustments are made, until the most suitable answer is found.

The creation of the embrace, i.e. the overall emotional definition and a boundary for the emotional content, will help elevate the performer's comfort level in dealing with the relevant emotions. As we have seen in Chapter 1, emotions are difficult to contain, but by labeling and drawing the large circle of the emotional embrace, one symbolically creates a container for the emotional content of the work and is reassured that however radical or overwhelming those emotions might be, they are nevertheless contained under a familiar characterization. The circle in the graph then represents both an openness to explore the emotions in the piece and also their containment. This following example might help shed some light on one of the other benefits that arises from this stage. (See Graph 1 on the following page.) If one is preparing to perform a group of Scarlatti sonatas, and debating in which order to present them, their emotional embrace can prove very useful in reaching a decision. Let us consider four Scarlatti Sonatas as an example. The definition chosen for the E major Sonata K. 531, might be 'Transitions between joy and sorrow', for the B minor Sonata K. 87 it might be 'Lament', for the famous repetition Sonata in D minor K. 141 it might be 'Anger and doubt', and for the C major Sonata K. 132 it might be 'Between peaceful and troubled'. These admittedly very general

definitions, give a reference point in viewing possible orders of presentation. The following graph shows the choices.



Graph 1: Emotional embraces and wave for the Four Scarlatti Sonatas

Another benefit of this stage can be found when one is performing a chamber-music work. It is common knowledge that conflicts of interpretation are an integral part of any chamber-music endeavor. Working through the first stage of the method within a

chamber-music group, though, can help relieve these conflicts by giving members of the ensemble a way to find the common denominator among their different interpretations. Finding a definition that all performers can agree upon solves one of the most basic problems of chamber music: emotional alignment to the piece and to one another. From work done with students at The New York Youth Chamber Music Program, I have come to realize how seemingly simple, yet profoundly helpful, this first stage is for chamber music ensembles. I have found that a margin of difference in interpretation almost always existed between the different players, structural elements were usually argued, and connotations and personal associations were rarely agreed on and as some players let their imaginations run wild, others refused to deal with any personal associations and insisted on concentrating on the printed notes. This stage then became a synchronizing tool for the ensemble. The performers first had to decide on whether there was a clear emotional connotation implied by the music, and then on a general association that they as a group could agree on. Once they reached a consensus, their music making ascended to a new level. The desire to reach a consensus, an image that will be shared by all members of the ensemble, and the actual process of finding this consensus, resulted in a sense of partnership and harmony between the players during both rehearsals and performance.[211]

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[211] Again to those concerned with absolute accuracy of image, connotation and association, one can only say that there are no absolute truths, no absolute correct connotations or associations. The one thing that can be said with certainty is that once these connotations and associations are made, the music making ascends to a new level. Once the first movement of Mozart's C major Piano Trio K. 548 received its emotional embrace by the young piano trio members as the 'Joyful adventures of the forest animals,' the joy of the players (ages 12-14) became palpable. The association between the joyful C major runs, and the liveliness of animals is not based on any written proof left by Mozart, yet it seemed to work miracles for these players, and since the listener is not judging the performance according to which image was used, but rather what was the performers' level of involvement and commitment to the music, this emotional embrace proved to be a very powerful one.

But what about mature artists? Could they find some value in practicing this stage? It is hard to make any kind of generalization on this subject, since most of the creative process experienced by great performers remains unspoken and/or undocumented. A rare instance of a great performer who did share parts of his creative process and who apparently did go through a process quite similar to what has been suggested here, can be found in a documentary about the late Leonard Bernstein.[212] Evidence of the fact that Bernstein had at times an emotional embrace in mind can be found in a film documenting his recording sessions of Mahler's Ninth Symphony with the Vienna Philharmonic. In it, Bernstein refers to the symphony as a farewell from the world of the living and gives titles to each of the four movements: the first movement he entitles 'A farewell to life and to human love', the second 'A farewell to the joys of country life', the third 'A farewell to the joys of urban life', and the fourth 'A farewell to one's existence'. It is safe to say, that Bernstein did not assign these titles simply for the purpose of making Mahler's music more accessible to the lay listener, as might have been the case in his concerts for young people, but rather out of his understanding of the emotional intensity of the music and what was needed for him, as a performer, to convey it. There is no indication in the video whether Bernstein's imagination and associative mind are what led him to these titles or if it was based on his knowledge of Mahler's correspondence and pencil commentary on the autograph of the piece. Regardless of their origin, these definitions surely assisted Bernstein in realizing his interpretation and creating his performance.

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[212] Humphrey Burton and Tony Palmer, directors, *Four Ways to Say Farewell: Gustav Mahler's Ninth Symphony, a Personal Introduction* (Long Branch, NJ: Distributed by Kultur International Films, 1971).

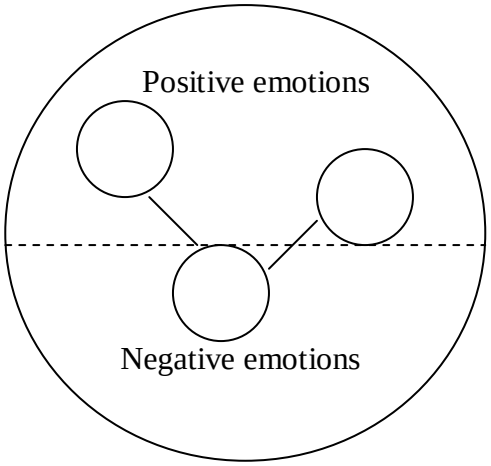
The Second Stage: The Different Stations and the Emotional Wave

The second stage of the Emotional Understanding Method starts with the performer conducting a general structural analysis of the work. It is not necessary at this stage to analyze each harmony and phrase, but rather to identify the large sections in the work and the relationships between them, such as the first theme, transition, development, and so forth. Each of the identified sections is labeled as a station, and is represented by a small circle in the graph.[213] The exposition of a sonata form could then include four major stations: the first theme, a transition, a second theme and a codetta. On the other hand a station could include an entire development section. The scope of the station is left primarily to the discretion of the performer. An important key in realizing the proper size and length of a station is a clear change of character in the music. For example, if within the development one clearly sees a definite change in character, it would be advisable to split the station into two.

After identifying the different stations in the piece, the performer is asked to give every station its own specific connotation and to place it inside the larger circle in the following manner: the stations portraying positive emotions should be placed above the circle's middle line and the stations portraying negative emotions should be placed below

[213] In Chapter 5 we will see that it is indeed necessary to go through an in-depth structural analysis in order to fully understand a piece and in order to realize one's structural set of decisions for it, but as far as the second stage of the method is concerned, one should start by considering the larger segments of the structure. Unlike Cooke's specific approach, this method does not ask the performer to find the connotation for each and every interval and harmony, but rather identify the emotional connotations of larger segments of the composition.

it (see Graph 2). Connecting the stations with a line reveals the progression of emotions though the composition. This line will be referred to as the emotional wave of the piece.



Graph 2:
The placement of stations and the emotional wave

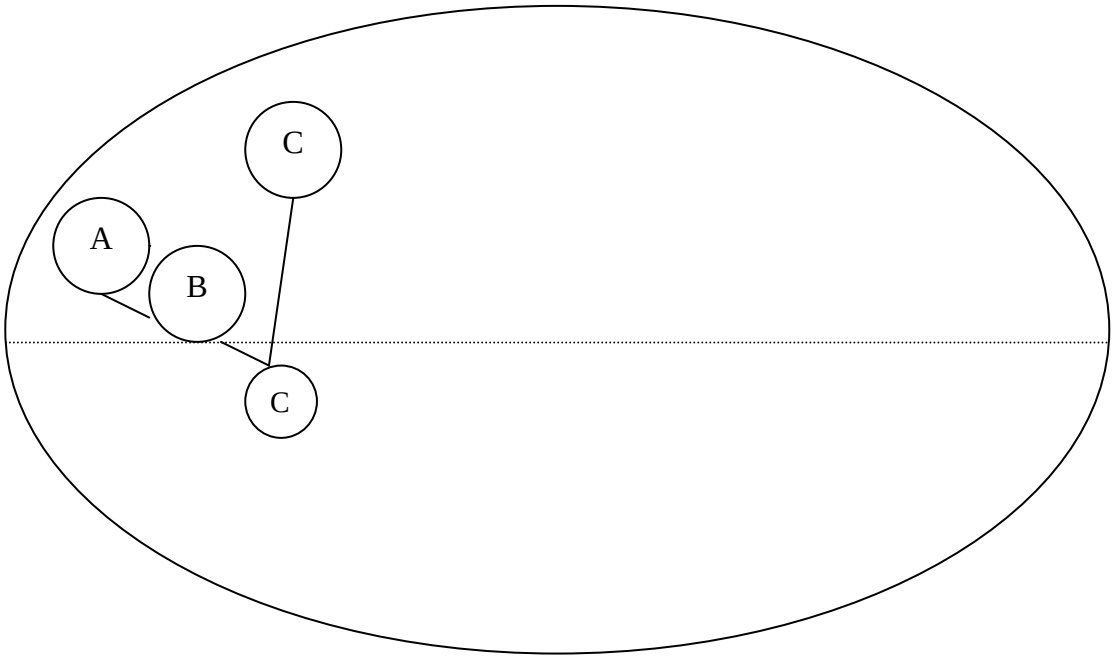
Several questions will surely arise when one is attempting to place the different stations. First, what should one consider a positive emotion and what should one consider a negative one? For the purpose of conducting this stage, one should follow the universal consensus regarding this division. For example, happiness, joy and love are usually considered positive emotions, while anger, sadness and depression are usually considered negative ones. Even if these emotions might have the opposite association for the individual performer (one perhaps feels that anger is a positive emotion), one should nevertheless, in this case, adhere to the universal view, which is probably the view the composer held as well. Another important question arises when one is attempting to place different emotions that belong to the same general group of either negative or positive emotions. Should one place sadness lower in the circle than anger? Should peacefulness be placed higher than joy? What scale should be used in finding the proper placement? This is indeed a complicated question, since there is no universal scale which

states the level of 'positiveness' or 'negativeness' of a given emotion in comparison to others. Therefore, in trying to answer this question, the performer should use her careful judgment and sensitivity to determine the best possible placement.

What usually helps determine the placement of a station, is the work's overall context, or simply, what other emotions are present. For example, if one has to place calmness, tenderness and confidence, one should use the context of the piece to decide which of these emotions would be considered by the composer to be the most positive. This could usually be determined by examining the structural placement and progression of emotions in the piece. Again this is not an exact science, and the performer will never be absolutely sure whether her placement is true to the composer's intention or not. It is more important though, that a position will be taken by a performer about the relationship between the emotions expressed in the piece.

Let us take the exposition of the first movement of Mozart's Piano Concerto in A major, K. 488, as an example (see Graph 3 on the following page). In this movement, the pianist is asked to make clear distinctions among several positive emotions. The first theme (A, mm. 67-81) is mostly calm and joyful with some definite mischievousness, the second theme (B, mm. 99-113) is sweet and tender, while the exposition's codetta theme (C, mm. 117-137) is mostly triumphant. There are three surprisingly menacing measures before the codetta theme appears, and the theme itself is broken with a hesitant dialogue between piano and orchestra, but the overall effect of the codetta theme is confident.

One possible way of placing these stations is shown in the following graph.



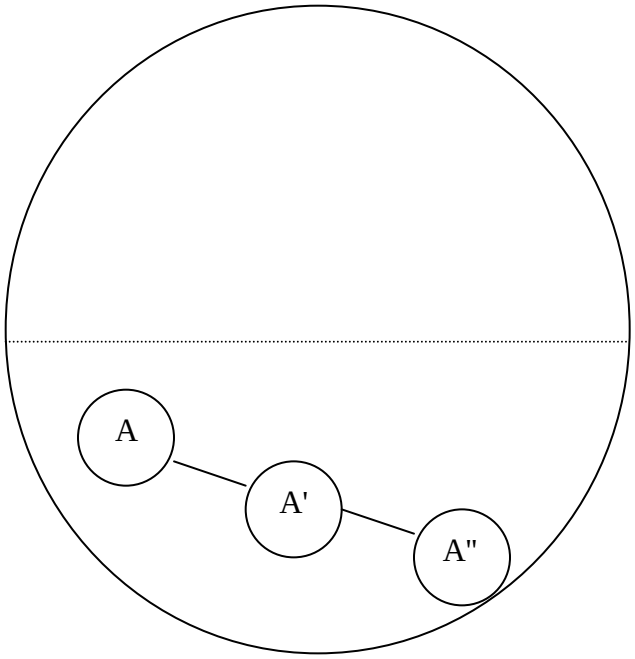
Graph 3: Mozart's Piano Concerto K. 488, the placement of the stations in the exposition of the First Movement

The extroverted joy of the first theme could merit a slightly higher position than that of the more introverted love of the second theme, while the triumphant and exuberant character of the codetta theme seems to end the exposition on an almost ecstatic note, placing it above the other two. Still, this is only one possible interpretation. There are numerous other ways in which one could map this exposition convincingly. [214]

We can safely assume that intensity is a primary key in finding a station's position. A first theme station labeled 'anger' will surely not be placed at the same level as its parallel recapitulation station, even though they probably share the same music. An

[214] The pianist should also discuss this issue with the conductor and match between her interpretation and presentation of the main themes with the orchestra's presentation of them in the opening ritornello.

example of this can be found in the first movement of Beethoven's Fifth Symphony (see graph 4). One can label the main motive as anger (A, mm. 1-5), the recapitulation appearance as fury (A', mm. 248-253), and the appearance of the same motive in the final coda as desperation (A", mm. 478-483).



Graph 4: Beethoven's Fifth Symphony, first movement, comparison of main motive in the first theme, recapitulation, and coda

The performer will find that with some stations the connotation can be found quite easily, while with others several attempts may be required. S/he should also be aware of stations that include two or more emotions. For example, a theme could have both hope and despair at the same time, as is the case in the first theme of Chopin's Mazurka Op. 17 No. 4.[215] It should be clear that in the placement of any station the performer should use her sensitivity and judgment, but this point should be emphasized

[215] See graph on p. 176.

even further in the case of stations with multiple emotions. The performer should ask whether one emotion is more prominent than the other or if both are equally important. S/he should also realize what in the music's structure causes the multiple emotional connotations. Again, s/he should not be deterred by not coming to a final answer immediately, but instead allow for questions and oppositions to be raised.

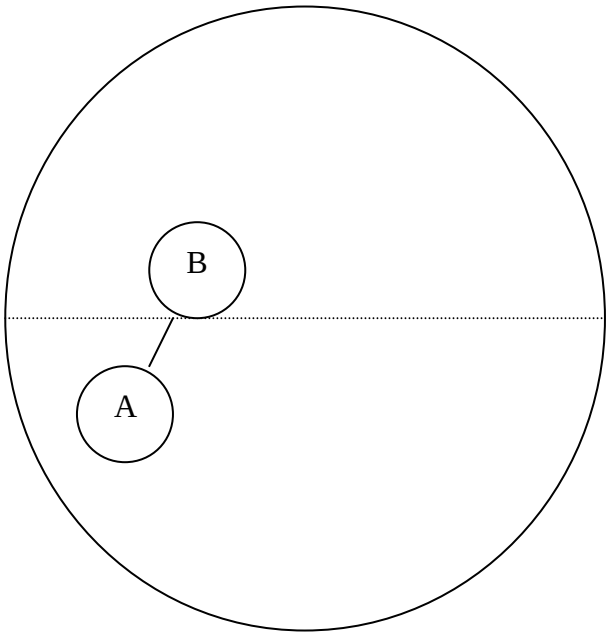
Once s/he has concluded the step of labeling the stations throughout the piece, the next step is connecting the stations with a line, the emotional wave. This line is the road of emotions s/he must travel to fully and accurately express the piece. It shows the emotional highs and lows, the transitions in the piece, subtle or abrupt as they may be.

The emotional wave is of course the graphic representation of the causal connection between emotions in music, an issue that was discussed at length in Chapter 2. As was mentioned, there are some dangers in allowing the different connotations to be tied. Meyer, for example, warns against following the associations, and creating a causal connection between them. He believes that both associations and connotations, which are indeed relevant to a certain passage, might cause extra-musical diversions that are not necessarily intended by the composer: "One image may follow another, not because of the associations which obtain between the images and the progress of the music, but because of the associations in the mind of the listener [or performer] between the images themselves."[216] For this very reason, it is essential to conduct the general structural

[216] Meyer, 256- 257.

analysis of the piece first. By doing so, the performer can make sure to be following the musical structure first and not simply letting her imagination run with free associations.

The emotional wave exposes another level of difficulty for the performer. Knowing what emotions s/he needs to express, enables the performer to fully express them. At the same time the emotional wave shows where s/he would need to shift between them on command, a difficult challenge indeed. Let us look at an example of a famous transition (see Graph 5.) The emotional wave shows, that in the first movement of Beethoven's Fifth Symphony, the four measures (mm. 59-62), which separate the first theme (A) from the second (B) are very important transition measures, structurally and emotionally. These measures show the difficult challenge the orchestra, with its hundred players and conductor, is facing in transitioning from anger to love.



Graph 5: Beethoven's Fifth Symphony, First movement, transitional measures between first and second themes

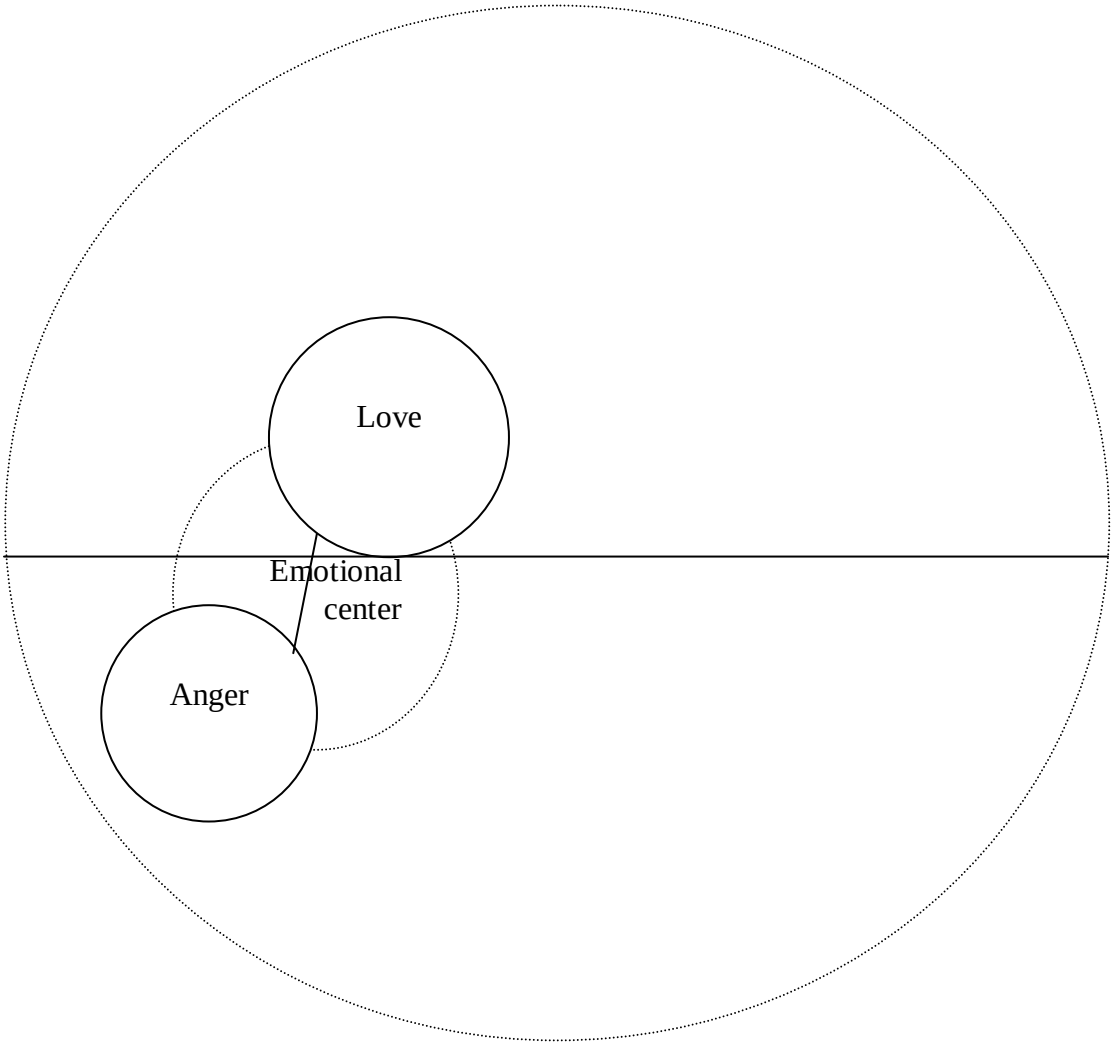
As we well know, transitions do not occur exclusively in logical and comfortable places. They can take place in the middle of a phrase, on a held note or even on an eighth-note rest. The emotional wave helps the performer identify the exact nature of each transition and prepare for it accordingly.

A clear example of a sharp emotional transition can be seen in the first of Brahms's Op. 118 piano pieces. The only element separating the two parts of this Intermezzo is a double bar line. It is up to the performer to realize what has caused this sharp transition between the exuberant and bright opening and the tragic and anxious continuation, and to then shift between them on command and in a split second.

With this second stage of the method another important element of the piece is exposed: the emotional centers or, if you will, the inner layer of the piece. The outer layer is, of course, the one printed in the score, the middle layer is the one just exposed by labeling the different stations. To go further and see the inner layer of the piece one should examine the emotional wave and locate the emotional centers underneath it. These centers are the basic emotions that are involved in the piece and usually correlate to the larger sections of the work: exposition and development, for example. In many pieces, the performer will find that it is the combination of several of these centers that creates the emotional conflict of the piece.[217]

[217] In the case of some works, it is the expression of only one main emotion that serves as the propelling force behind the music. The existence of only one emotion per piece clearly echoes the Baroque tradition of the *Affektenlehre*.

In the case of the Beethoven's Fifth Symphony, the emotional center of the first movement exposition includes anger and love, see Graph 6:



Graph 6: An example of an emotional center in Beethoven's Fifth Symphony

The emotional center here clearly includes both emotions at the same time. Similarly to a person who is torn between conflicting emotions, Beethoven starts by first expressing one emotion and then immediately turns to express its opposite. The identification of the emotional centers of the inner layer mean that the performer has a firm understanding of

the emotional conflict of the piece. At the same time, the identification of the emotional centers also helps the performer find the middle ground between the different emotions of the piece and determine the correct boundaries for the expression of those emotions.[218]

The Third Stage: Placing Boundaries

After finding the fitting connotation for each of the stations, and uncovering the inner layer of the piece, a clear boundary should be assigned to each of the stations. For example, if the connotation is that of happiness, the performer should also determine if the composer is asking her to allow the full potential of this emotion to be expressed and reach the highest levels of joy or to simply express a good-natured attitude. It is of vital importance that the performer be clear on how far each emotion will be allowed to stretch. There are two reasons for doing so: (1) without boundaries one increases the chances of emotional flooding; and (2) because the beauty of the music sometimes lies in the performer's ability to adjust the boundaries of a given emotion throughout a piece. Using clues left by the composer and her own judgment, the performer must therefore find the best-suited boundary for a station.[219]

As is the case with previous stages, this stage requires substantial experimentation. The performer should try different boundaries until s/he finds the most suitable one. S/he should also not be surprised if as a result, her original emotional

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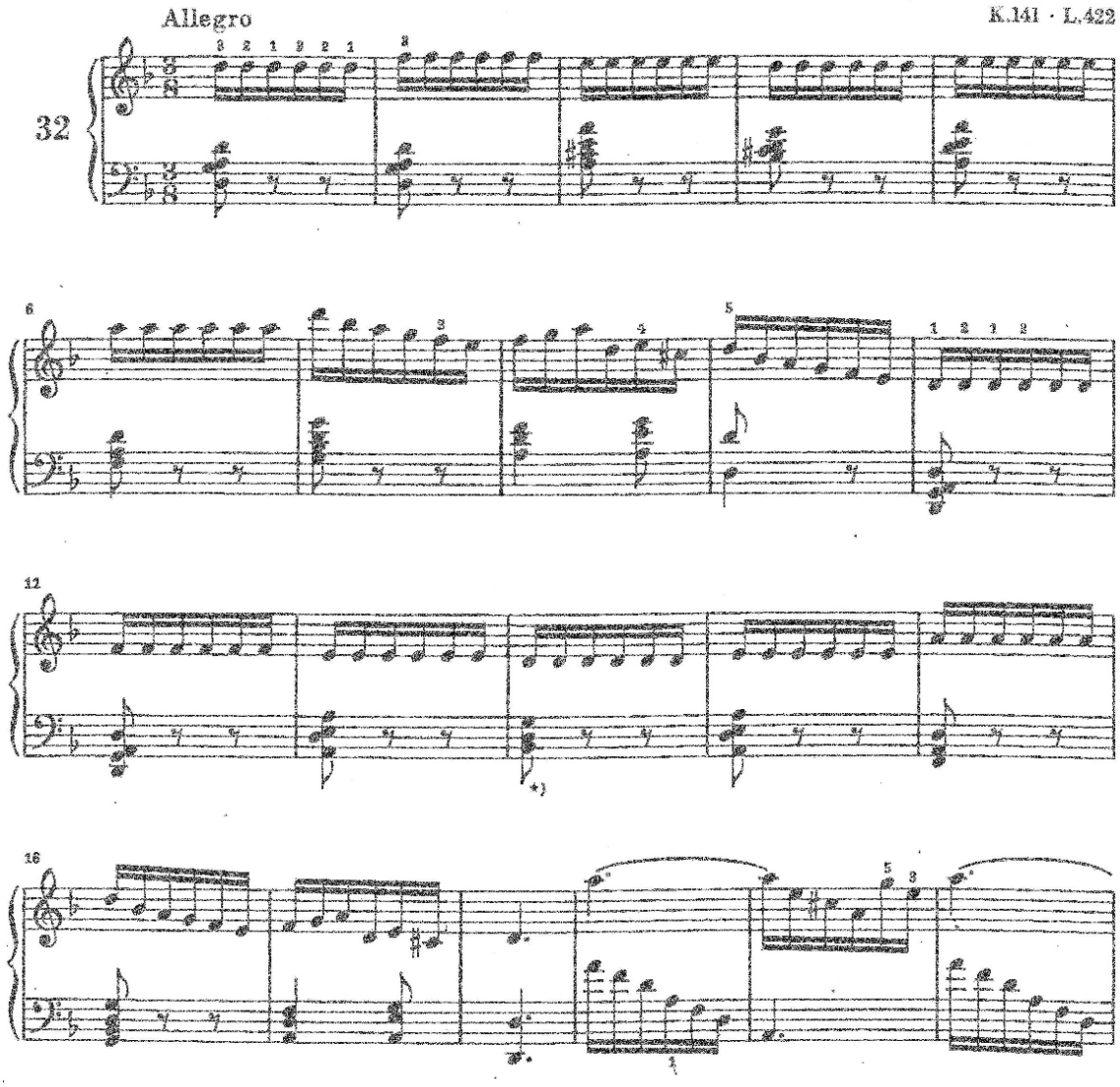
[218] To view an example of a complete inner layer, the reader should turn to p. 169, where the analysis of Chopin's mazurka is presented.

[219] For more information about emotional flooding see Chapter 1.

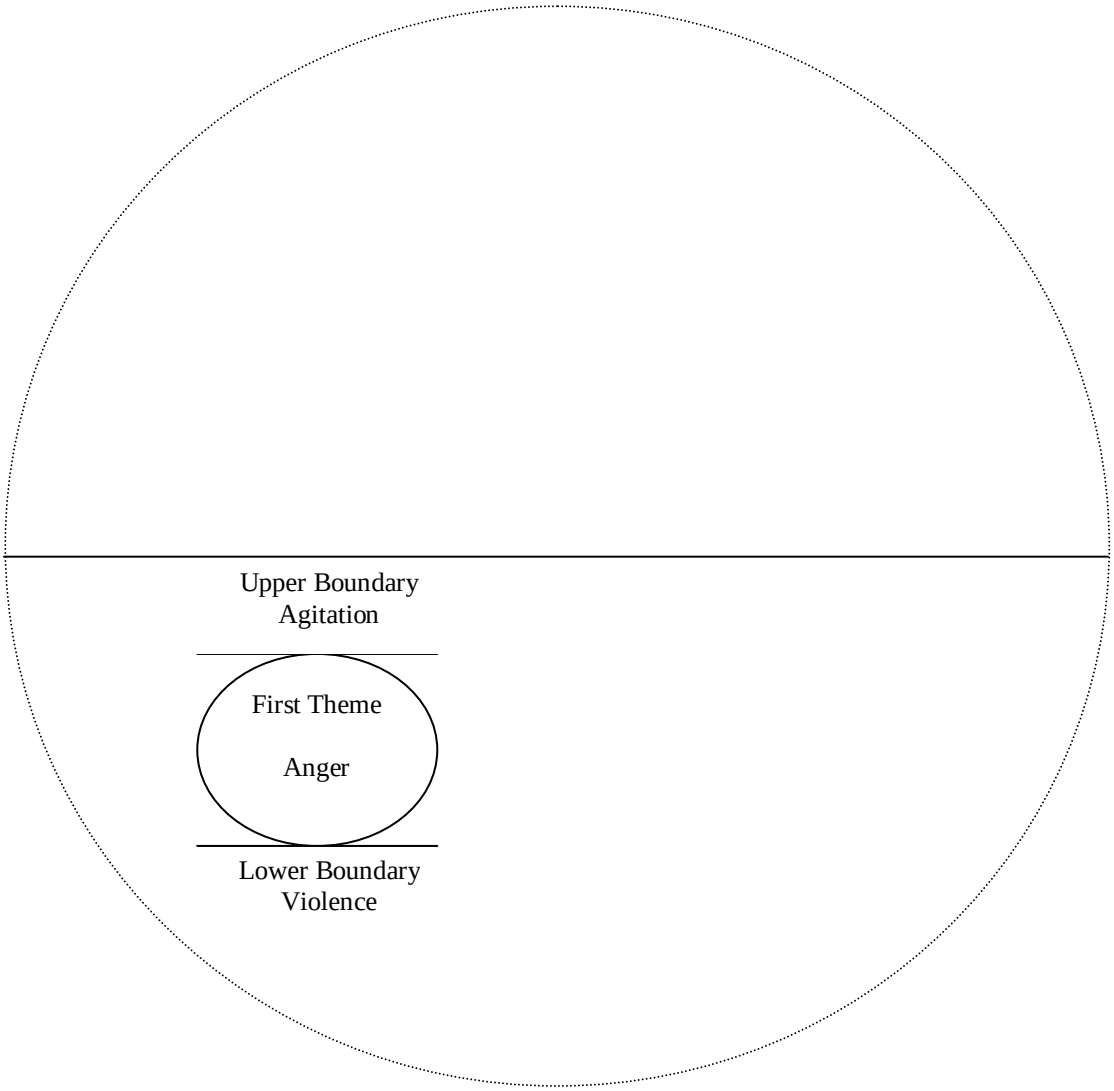
connotation for the stations will shift, since it is often the case that when experimenting with the boundaries of a station, one realizes that a different yet related emotion is better suited.

To better understand this stage, let us examine Scarlatti's D minor Keyboard Sonata, K. 141 (see score on following page and Graph 7 on p. 140.) Assuming the connotation one has for the opening theme is that of anger (taking into consideration the Baroque stylistic convention of concitato, it is unlikely that this beginning is aiming at any other emotion but anger), this station's boundaries could be described as follows: the upper boundary would be agitation, and the lower boundary would be violence. These boundaries place the anger expressed in this particular instance, between agitation and violence. In working through this stage, the performer is facing again some of the same questions raised in the second stage of the method. How does s/he know, for example, that the boundaries have been placed correctly? The 'correctness' in this case is also left to the performer's discretion, i.e. personal taste and understanding of style. Through experimentation, the performer can come to a satisfying answer as to which of the boundaries would be the most appropriate.

Ex. 1[220]



[220] Domenico Scarlatti, *Ausgewahlte Klaviersonaten*, Band 2 (Munich: Henle), 24



Graph 7: Assigning boundaries to the first theme of Scarlatti's D minor Sonata

It is important to note that the boundaries are essential for yet one more reason. It is often the case that when one aims at expressing a certain emotion, one is bound to express a lower intensity level of that emotion. For example, if one aims to express violent anger, in reality one will only be expressing anger, or if one is aiming at happiness, one will inevitably express a good-natured mood instead. Why this is the

case, one can only hypothesize. We have already seen in Chapter 1 how difficult emotions are to understand and use, and if one adds to this the fact that our perception of what we really express is very often tainted by our skewed perception, one might have the answer. Another explanation is that, we have been taught that the suppression of the expression of emotion is a positive value, and therefore going against this value system might result in a 'bad aim', i.e. a weak portrayal of the desired emotion. To solve this problem, what is asked of the performer is similar to what is asked of a runner before s/he passes the finish line. As the runner reaches it, her instinct is to slow down, since the end of the race is in view. But in fact, s/he must aim beyond the finish line in order to not slow down and to achieve the best results. Similarly, the performer needs to aim beyond the boundary of the desired emotion to a higher intensity level of it. In the case of Scarlatti's K. 141, s/he needs to aim at violent anger to express anger. With time, the performer will learn how much emotion is indeed required by a passage, and aiming will become more natural.

Again, discerning the boundaries is complicated because there is no universal list of 'which emotions precede which'. An emotion that might seem to one performer to be the step beyond mere anger will not necessarily be the same for another, or for the composer for that matter. The guiding rule in establishing the boundaries and aim should be one's common sense, and, as Leopold Mozart states, that the listener will realize what emotion the performer is conveying in the music and will be moved by it. In establishing the boundaries for the entire piece and interpretation, one should also take into consideration the boundary of style. Since anger in Scarlatti's music is quite different

from anger in Prokofiev's, the performer should always remain sensitive to the era in which the piece was composed and should at least take the boundaries imposed by that era into consideration.[221]

The Fourth Stage: Connecting with the Composer's Emotional Intention

After completing the first three stages of the method, the performer should have a grasp of what, in her opinion, the composer's emotional intention for the work is, and should be ready to tackle the next stage. Here s/he will be asked to find a way of connecting between her emotions and those s/he identified in the music, i.e. a way of connecting her unique experience of these specific emotions with those s/he uncovered in the piece. The reasons for going through this stage have already been discussed in Chapter 2, in the writings of Cooke and the other referentialists. We have seen that in order for a performance to be meaningful to the audience, the performer must remain sincere in her expression of the emotion. This can be achieved either by empathizing with the speaker in the music or by becoming that speaker. For actors as well as singers, this process of searching for a personal emotional connection to a role, is a daily matter, since in the greater part of the theater world it is taken for granted that the performer should use her emotions to bring life to a character or a scene.

[221] This is an interesting topic for debate. Could it be that because the expression of emotion in classical music is so restrained and stylized, it has lost its relevance to today's expression of emotion and therefore society? This discussion deserves its own research.

In tracing the origins of this line of thinking, one goes back to the writings and techniques of the famous Russian theater director and writer Constantin Stanislavsky,[222] and to the more contemporary application of his principles by Lee Strasberg, at the Actors Studio in New York.[223] In the latter's studio many young actors, who later became leading men and women, were trained in accessing their emotions and using them to create more convincing characters and more exciting performances. Though music making offers a very different challenge from acting – for example, the lack of a specified emotional reference point in the case of instrumental music versus the existence of text in acting – both nevertheless revolve around the same task: the communication of emotions. It should not be such a far-fetched notion then to take a tool from the actor's tool kit and learn how to apply it in the musician's domain.

Having gone through the first three stages of the Emotional Understanding Method, the performer should have now a specific emotional reference point for the piece. By organizing the connotations to the music into one cohesive interpretation, s/he should have realized the emotional content of the piece. S/he is now asked to find her own personal connection to this intention and to the emotional conflict of the piece. It

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[222] For more information about this, see Constantin Stanislavsky, *Creating a Role* (New York: Routledge, 1989). Stanislavsky's principles were based on a book written in 1896 by the French psychologist, Theodule Armand Ribot, titled *The Psychology of the Emotions.* This book helped Stanislavsky to create the memory exercises which were used in the actor's training. These exercises were designed around recalling the sensory atmosphere of a past event, enabling the actor to then recapture that emotion and use it in the creation of a character.

[223] For more information on Strasberg and the Actors Studio see also: Herbert Klein, director, *Acting: Lee Strasberg and the Actor's Studio.* (PBS) and Robert H. Hethmon, Ed., *Strasberg at the Actors Studio* (New York: The Viking Press, 1965). The questions that motivated Strasberg in his development of his method were: "How can an actor both really feel and also be in control of what he needs to do on stage? How can the actor make his real feelings expressive on stage?" --quotation from Ron Gilbert, *The Method – an Actor's Journey*. 16 May 2006 <http://www.methodfest.com/04pages/industry/gilbert.htm>

might seem as though there is an inherent conflict in the task at hand. How is the performer to determine at which point s/he is following the composer's intention and at which point s/he is following her own emotional agenda? The performer indeed is walking a very narrow path between the general connotations and the personal associations. It is very difficult to say when the performer is projecting associations onto the music that are not there, and when s/he is identifying emotions that are put there by the composer, i.e. the connotations. The honesty of this process lies with the performer. As long as the performer distinguishes between the first three stages and searching for the composer's intention, between what s/he can label as connotations and this stage, in which s/he is accessing her own experiences and her own associations of these emotions, s/he can rest assured that s/he, if not able avoid this conflict, will be able to minimize it.

Finding the connection then can be achieved in several different ways. One possible way is inventing a personal scenario based on real or fictitious images that will allow the performer to access the needed emotions within her and connect them to those emotions s/he believes the composer wished to express in the music. In creating this scenario the performer should use whatever images come to mind that prove relevant to the emotional wave of the piece, and that allow for the proper emotions to emerge.

Again, one should stress the difference between finding the connotations in the method's first three stages, and finding the personal associations that will allow the performer to access her emotions under pressure. To clarify the difference let us take the first theme of Mozart's Piano Concerto K. 488. The connotation here, most likely, is

with joyful, pleasant, and pastoral emotions. It is now up to the performer to find her personal association to these connotations. Perhaps imagining a walk s/he took on a spring day would arouse these emotions in her, while for another performer it might arouse a memory of a hike in the Swiss Alps. The important point here to remember is that the performer should find a personal image that will connect her to the general connotation and therefore express the desired emotion.

As was explained previously, the scenario can use the images of a personal emotional experience that have been adapted to the boundaries and style of the specific piece, or it can be based on imaginary events that seem to the performer relevant and appropriate. By either using the resources of one's own memories or imagination, the performer can bring the music to life and engage the audience in a more profound interpretation of a work. When practicing this stage, the performer should keep several things in mind. S/he should, on the one hand, feel free to use her imagination and be open to the possibilities of different associations. At the same time, s/he should remember to treat these associations with caution.

There are several reasons for practicing caution here. The first, of course, is that a chosen image might not always be relevant to or compatible with the music. Some images might seem appropriate at first, but when applied to the music will not completely match it; either the emotion conveyed in the image would be too much, too little or simply inappropriate. It is up to the performer, then, to maintain constant awareness and to question herself at every juncture as s/he attempts to find the best suited image. S/he

should keep her priorities clear; music first, image second, and if an image does not serve the music, discard it.[224] Another reason for practicing caution is that under the duress of a performance accessing the imagination could become a tricky task. It is therefore important to remember that one should find an image that is as clear and as real as possible. Only then would the emotion be accessible under the pressure of a performance.

Let us take the opening measures to Schubert's *Wanderer Fantasy* as an example. One possible association to the opening measures could be the invention of a happy-go-lucky wanderer who is excited to set out on a journey in the Austrian forests. On the other hand, the performer could recall how s/he felt at the outset of an exciting trip. The danger in using the first association is that if s/he has never been to Austria or has never seen a forest, there is little chance that under the duress of a performance s/he will be able to conjure this image up. The second association, on the other hand, which is based on a true memory and experience, is less likely to disappear under pressure. In general, the more truth there is in the chosen association, meaning the more one has felt the emotion in one's real life, the easier it is to access that emotion under pressure.[225]

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[224] This is easier said than done, since for some performers image can take over an interpretation, making the music the image's victim. Tempi and dynamics are altered to match the image, rather than the other way around. As difficult as it is to avoid the temptation, the performer should remember that the images are just tools and not ends in themselves.

[225] This is of course not to mean that one must be tied to and dragged by a horse in order to perform a successful rendition of Liszt's *Mazzeppa*. The imagination is an important tool in the creation of a strong association to the music's emotional wave, but it is fickle under pressure and should be treated with caution.

In most cases the more specific the association is (both real and imagined), the easier it would be to access the emotion on stage and the more engaging one's performance will be. However, for some performers, it is not the specificity of the connection that helps make for a good performance. Some performers are capable of connecting to the emotions in a piece without the assistance of a specific image. In fact, for some of them, the specificity actually inhibits their performances.[226] The conclusion one can therefore draw is that there is no one correct way of conducting this stage and that each performer should find her own.

Another reason for practicing caution with images is the natural tendency to forget that one's image should encompass an entire piece. The images and scenario chosen by the performer should contain the entire piece, all of the turns and transitions of the emotional wave, in order to achieve maximum effect.

For example, if the stations of the emotional wave take the performer from expressing tender love, to sadness and misery and back to tender love, as is the case in Brahms' Intermezzo Op. 118, No. 2, the performer's scenario should include all of the above mentioned stations, and not just a few.[227] One possible scenario which will

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[226] One of my students, Lisa Liu, claimed that she did not require the fourth stage of the method and that once she had identified the emotions in the piece to her satisfaction, she was able to access them without much difficulty. It was the abstractness of the connection, and the lack of attachment to a specific storyline or personal experience that made for a comfortable connection in Ms. Liu's case.

[227] This rough emotional wave might sound simplistic to some readers when compared with the depth of the music. I would agree up to a point and say it is indeed simple, but not simplistic, and insist that there is a reason for making it so. The stages of the method described so far, such as identifying the embrace of the piece, the stations and the wave, are in some way the easier stages; all they require is one's willingness to investigate. The difficulties arise when one reaches the fourth stage, and when the actual expression of

encompass the entire wave of this Intermezzo, would be a love scene in which the lover is speaking to her beloved, remembering a past in which s/he was lonely and only dreaming of love (in the middle section), and realizing that her beloved is now at her side in the recapitulation. Another possible scenario is to view the entire Intermezzo as a lullaby. The tender feelings are expressed towards a child and the middle section's pain is the speaker's empty past.[228] What will not be helpful, on the other hand, is to disconnect the images from one another and/or mix them around by, for example, starting the piece with an image that shows tenderness to a loved one, in the middle section using an image of a lost friend and concluding with the image of the a lullaby. In attempting to establish an emotional connection to the piece, it would also be unhelpful to use an image that only depicts partial aspects of a piece; in the case of the Intermezzo, it could be the image of a flowing brook, for example. Though indeed the slurred eighth-notes in this piece are clearly flowing and water-like, this image by itself does not contain any of the emotional conflict of the piece. This is not to say that one's playing would not be significantly enhanced by an image of a flowing brook, and that it should not be incorporated into the general interpretation, but to say that in itself, it will not carry the emotional weight of the piece.

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emotion needs to come into play. Keeping the definitions simple helps focus the performer on the task at hand: in this case the communication of tender love.

[228] One only needs to listen to the first of Brahms' Op. 91 alto songs, and the first of the Op. 117 *Intermezzi*, to realize that this interpretation is highly plausible.

Confronting Unsettling Emotions

Before we move on to the fifth stage of the Method, we must address the issue of unsettling emotions. For this purpose let us turn back to Cooke: "The fact is that people can only react to the emotions expressed in a work of art according to their own capacity to feel those emotions…the truly musical person, with a normal capacity to respond to emotion, immediately apprehends the emotional content of a piece of music to the degree that he can experience it."[229] But what happens if the performer has not experienced the emotion, or more likely, has for some reason suppressed it? When a performer accesses her fear, anger, love or happiness, s/he also confronts the judgments s/he has placed on these emotions. S/he might feel, for example, that shouting when angry is uncultured or that the expression of romantic love is a cliché. Confronting these judgments or the mere fact that one is now consciously dealing with certain emotions can cause severe discomfort.[230] Here is a specific example. If a performer is required in a certain passage to express tenderness, but has rarely or never experienced this emotion in her own life, by playing the passage, s/he will be forced to confront tenderness and the judgment/s s/he has placed on it: 'I don't know what tenderness feels like and therefore I cannot express it', is what the judgment would sound like. As a result of this judgment placed on

[229] Cooke, 21-22.

[230] Some of the information in the following paragraphs is derived from Linda Joyce's writings. For more information see: Linda Joyce, *The Star Within* (New York: Citadel Press, 2003). In this book Joyce, a noted therapist, discusses the nature of and reason for placing judgments on emotions.

tenderness, the performance of this passage might sound harsh and in extreme cases it might cause the performer to suffer from hand pain.[231]

If a performer finds that s/he is feeling discomfort because of a certain passage and the emotion that passage requires, s/he should stop playing, and instead try to realize the nature of her discomfort by labeling the judgments s/he has placed on that specific emotion. In some cases these judgments will be closely tied to an upsetting memory or even trauma, and it is therefore extremely important to take extra care and caution when approaching the removal of these judgments.

For another specific example let us examine the first movement of Mozart's Sonata K. 330 in C major. Let us suppose that the performer feels discomfort while accessing the joy, faith and humor of this first movement. If the performer chooses to expose the judgments s/he has placed on these emotions, s/he would realize that s/he perhaps has judged them as being juvenile or simply unreal, the reason for this being perhaps the way s/he was brought up, a comment from a teacher who was too serious, and so forth. The discomfort arises from not wanting to accept joy, humor, silliness,

[231] This last statement, though requiring further proof, is based on my work with my students and my own experience. Hand injuries are the result of many different causes: misuse of the hands, over-practicing, accidents, etc. A reason that is not usually mentioned in this context is that hand injuries could be caused by tension created by the need to express an emotion and the personal judgment one has placed on it. The need to play the notes, on the one hand, and the desire to run away from feeling and expressing this emotion, on the other, would cause a conflict of interests, so to speak, in the body. The hands are asked to play and at the same time they are asked to stop, a mixed message that could create debilitating hand injury.

child-like play and deep faith as acceptable emotions in one's life and therefore as acceptable emotions on stage.[232]

The performer's discomfort could be elevated by the mere fact that s/he has now made these judgments conscious and changing them. By exposing the judgments and confronting them (childish joy is a very useful emotion, even for the most serious of musicians), hopefully s/he will open the channel to expressing this emotion. S/he could then try to access these emotions for the duration of a movement or for a short experimentation session, to monitor her reaction.

Finding the judgments one has placed on emotions could be an elusive task. What will expose them, nevertheless, are the images or scenarios one chooses to associate with the music. These images offer a place where one can also change one's judgments. Going back to the Mozart Sonata, if the performer cannot identify herself as the speaker in the piece, who is filled with joy and humor, s/he could change her image and include a different speaker, an appropriate character, let's say Susanna from *The Marriage of Figaro*, to express the joy and child-like humor of the piece.[233] The performer's judgments will probably manifest themselves in Susanna's inability to sing, act and be joyful. By reminding the performer that it is appropriate for this character to be singing, be joyful and be humorous on stage, and that these emotions are an important

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[232] As we have seen in Chapter 1, emotions tend to have a will of their own. If one was not allowed to express childish joy as a young adult, one will have a problem expressing it as a mature person, even if all one is dealing with is childish joy in music.

[233] The melodic lines in this sonata surely suggest one of Mozart's joyful female characters.

part of the character's palette, the performer can allow herself to reconnect to these emotions. Once this has happened and the performer has expressed them (even if it is by using a third party character), s/he would have started the journey of lifting the judgments and accessing her own joy and humor.[234] To conclude, while practicing, and most importantly, before going on stage, the performer should remind herself of the image s/he has chosen for the connection to the piece. This image will create the emotional reality on stage, and will propel the connection to the work's emotional wave. It will make sure that the performer will be able to connect to the emotional content of the music and express it to its full potential.

The Fifth Stage: Finding the Balance – Disconnecting From Emotion

As we have seen in the previous stage, working with one's emotions is a complicated task that could arouse welcome as well as unwelcome emotions. As a result, the performer faces two major problems. The first is running the risk of being overwhelmed by a certain emotion while being on stage, and the second is that due to the newly found intensity and availability of an emotion, the performer might find herself indulging in it, and subjecting the audience to a performance in which the emotions are

[234] One might be asking how is it possible that the performer will be able to allow a character to express an emotion s/he is not comfortable expressing herself, and in some cases express an emotion s/he has never experienced at all. Can the performer express emotions s/he has not felt? The answer to this is that we all learn first by imitation. Whether it is by imitating our family members, our teachers, or our friends, we learn to express ourselves by imitating those who are around us. Therefore, using and imitating the emotional behavior of a familiar character will serve as a trigger, as a pathway to one's own vocabulary of emotions, even if that emotion was suppressed and judged.

exaggerated. It is therefore absolutely essential for the performer to find and practice the correct balance between involvement and detachment in a performance.[235]

Finding the proper amount of detachment during a performance could be achieved in several ways. After finding the personal connection between her emotions and the emotional wave of the music, the performer should choose a form of disconnection. S/he could achieve this quite naturally by basing the emotional connection on an experience from her far past, and/or by having the scenario conveyed by a fictitious character,[236] or it could be achieved by simply experimenting with the amounts of emotional involvement needed to convey the emotional content of the piece successfully, and by doing so, decreasing the chances of being overwhelmed. If for example, one decides to connect to a piece that one believes deals with unrequited love by using a personal memory containing that emotion, one should make sure to use an experience from one's far past and not an experience that occurred the day before. The far-past perspective usually

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[235] We all know the feeling of listening to an artist who is obviously feeling the music very intensely, but we as audience members are not able to empathize with these emotions. There are many reasons why this may be, and not one right answer. In the case of an exaggerated performance, the inability to empathize is perhaps due to the fact that the expression of emotion is beyond the realm of the believable for the listener. In the performer's quest for an engaging performance, exaggerating an emotion is as detrimental to the performance as not expressing the emotion at all. If the performer wants to convey intense grief to the audience, such as in the sentence: 'My best friend just passed away', shouting and crying hysterically will probably not do the job. What the audience will perceive is not the performer's grief, but her instability. The performer should therefore always consider whether her expression conveys the emotional intention to her audience, and whether her way of expressing this emotion allows the audience to empathize with it.

[236] Again, the performer is asked to walk the thin line between imagination and reality. To create a viable connection, the performer can use a real event that s/he has lived through, but instead of relating it herself to the audience as the speaker in the piece, s/he can replace herself with for example a favorite actress. This substitution is one of the best forms of disconnection for the performer, since on the one hand the emotion one is relating is real but in the actual performance it will be carried out by a third party, leaving the performer slightly detached.

gives enough time for the emotion to have been processed, to subside and to be now malleable to match the emotional wave and the boundaries of a piece.

Another, more creative, way of disconnecting was found when Dr. Fabrikant and I were working on the first of Brahms' Op. 76 *Fantasy Pieces*. The opening measures of the dark F-sharp minor Intermezzo, were extremely upsetting for Dr. Fabrikant, so upsetting in fact, that she could not start the piece without experiencing severe arm pain. In order to create a sense of detachment and safety from the emotional pain of the beginning, I advised Dr. Fabrikant to play the last phrase of the piece before she started. This Intermezzo concludes as the darkness and misery give way to a new light and beginning. Playing the last phrase before she began the piece gave Dr. Fabrikant a sense of safety, that there would be light at the end of the tunnel, and allowed her to plunge into the abyss of the opening measures without hesitation.[237]

Another disconnecting challenge can be found in the music of the contemporary Israeli composer, my colleague and dear friend, Avner Dorman. Performing his piano music makes one realize how relatively 'emotionally safe' a Scarlatti Sonata is. In Scarlatti's music, the emotional involvement, no matter how intense, will be always restrained in the Baroque style. But because the emotions expressed in Dorman's music belong to our time, the music ceases to be 'safe' and the disconnection for the performer becomes much more complex. In the case of Dorman's music, the performer faces the music and therefore the emotions of the 21st century. Violence, lust, murderous anger,

[237] In a concert setting, Dr. Fabrikant obviously did not have the option of actually playing the last phrase before starting the piece, and therefore I suggested she just hear this phrase in her mind's ear.

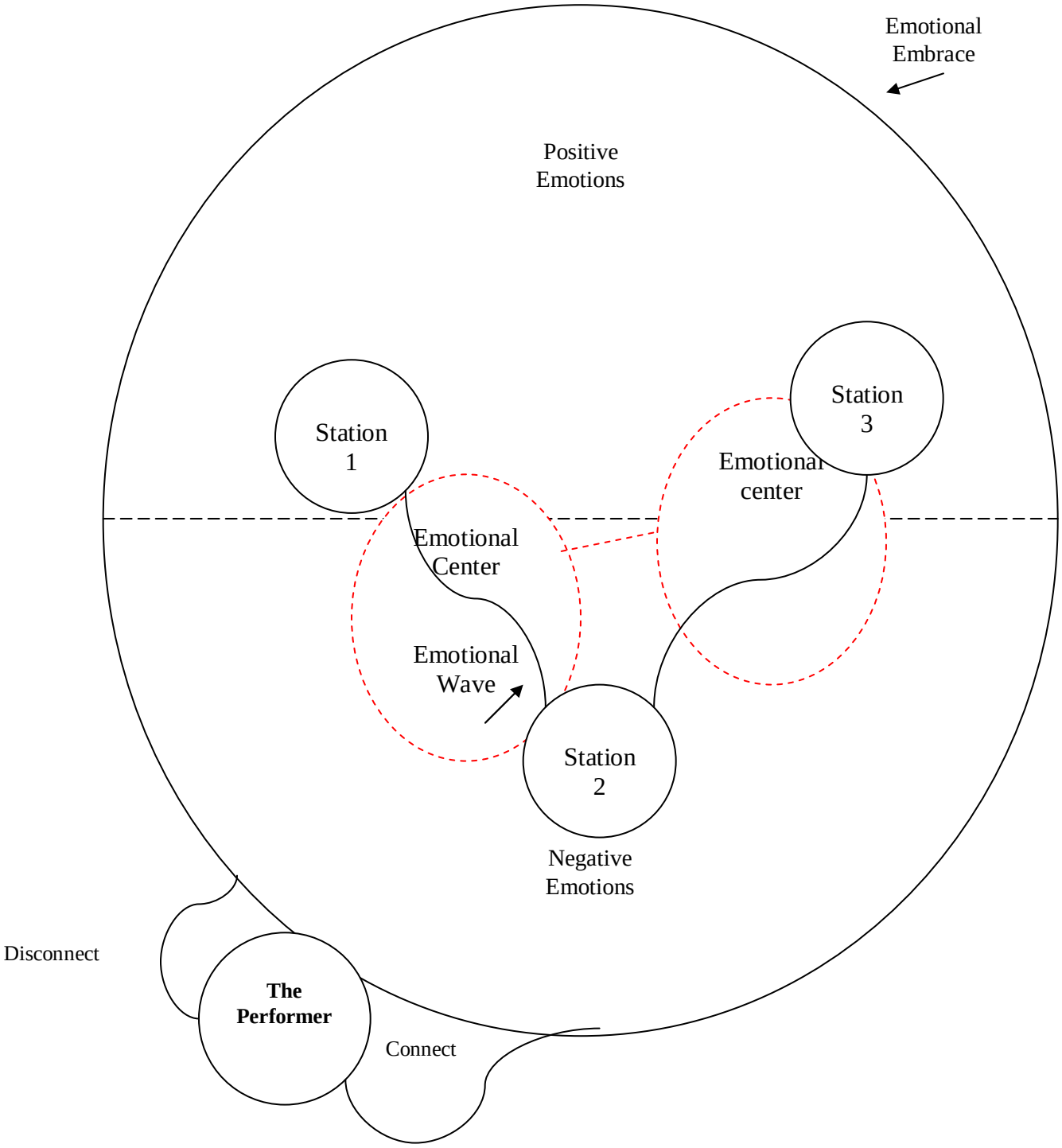
and drug infused raves, are all very much the emotional vocabulary of this music. Because these emotions, and the events with which they are associated, are so much of the performer's reality, it is much more difficult to establish the line of detachment between the performer's reality and the emotional reality s/he is expressing on stage. The emotions in Dorman's music are difficult both to access and to control, not only because of their immediacy, but also because of the depths of negativity that they reach. In order for the performer to find a comfortable balance between expression and detachment, and find a place from which these very dark emotions can be expressed without being overwhelmed, one should replace real events with fictitious scenarios, true experiences with imagined ones. This way enough distance is created between the music and the performer, so that the emotions would not overwhelm her. At the same time the emotional intensity that the music requires, and the sincerity of the emotion, can be accessed.

The fifth stage asks the performer to balance intention with result. To help find this balance, another helpful tool is the tape recorder. It enables one to sit on both sides of the fence: as the performer and as an audience member. This in turn frees the performer to identify the parts in her interpretation that are convincing and true to the piece's emotional wave and those parts which are not. Some clarification is needed regarding the role of technique in all of this, since it will not be discussed separately in this document. As we have seen, the fact that the performer feels the music is not necessarily an indication that audience members will feel it as well. The performer must have enough technical control to go beyond understanding and feeling the music to

convincing those who are listening to her. No amount of structural analysis or emotional attunement can compensate for the lack of technical control of the instrument, or for her inability to physically express the structure and feeling of the music in the notes themselves.

Graph 8: The Five Stages

The Piece



4.3 Emotional Challenges in Performance

The following section discusses some of the specific challenges that arise from the application of the Emotional Understanding Method to music, and offers some possible solutions.

Opening Measures

Opening measures are challenging in every respect. They are difficult to execute technically, because they are the first to be performed and one is usually is not warmed up yet. At the same time, they are also difficult to sustain structurally because they carry so much of the piece's weight; and finally they are difficult to connect to emotionally, because one has to create the emotional reality seemingly out of thin air and in some cases while fighting stage fright.

In the opening measures to Liszt's B-minor Piano Sonata, or those of Debussy's *Clair de Lune*, one finds an added difficulty. These openings are not just difficult to perform because of the reasons listed above, but also because of the extreme emotional reality they require the performer to present from the outset. In order to guarantee the full emotional expression of these openings, the performer must connect to the emotion s/he is about to express in the silence that precedes the composition's first notes. Before starting, the performer should close her eyes (either before going on stage or while on

stage), and recall the first image of the scenario s/he chose. In the case of Liszt's B-minor sonata, s/he should connect to the menacing qualities of the three-octave unison, and in the case of Debussy's *Clair de Lune*, connect to a state of otherworldly tenderness. The image carries in it the emotion the performer will need for performing the piece convincingly and will make it easier to execute these measures.

Another basic problem, that is not specific to openings but will surely manifest itself in them, is the possible discrepancy between the emotion the piece requires and the performer's actual mood when s/he starts playing. Hopefully, a carefully thought-out scenario and image will help minimize this discrepancy and connect the emotion needed to the emotion felt, but this gap can nevertheless still exist, even if the performer has properly prepared, and therefore, the performer should be ready to confront it.

As I was working with Dr. Fabrikant on her performance of the second movement of Schumann's *Fantasy* Op. 17, we discovered that even a straightforward beginning such as this movement offers, could pose a potential problem. Not only were the triumphant qualities of this beginning difficult to access and be convincing with, but accessing them when one was in a bad mood, was close to impossible. The performer must take into consideration the fact that s/he might not be in a triumphant or very festive mood on the day of a performance and should attempt to minimize the discrepancy by establishing a viable emotional connection to the piece, an image or a scenario, and practice it. The connection will allow her on the day of the performance to find a way to bridge her emotional state and the one which the piece requires. This being said, the

other extreme, forcing oneself to feel the exact same emotion in every performance, is not recommended either. One should be able to allow the moment to be a part of one's performance, and whatever variation the moment offers should be incorporated into the performance. For example, one can use the adrenalin surge caused by stage fear to fuel the enthusiasm needed for the Schumann. Or if one has less energy than usual a more subdued yet confident performance would be a good solution. The goal here is a balance of intention and freedom. Not choosing one over the other.

Transitions

With transitions, a different challenge in expressing emotions in performance is exposed. Let us assume that the performer is capable of accessing with ease a myriad of emotions. Could s/he now move between them as the music commands? The performer must be aware of what emotion s/he is coming from, what emotion s/he is leading to and even more importantly, note how much time s/he has to shift between them. Making a transition between different emotions might seem a simple enough task, but in fact it is extremely difficult. Letting go of one emotion in favor of another is enough of a challenge in real life; and in music, when one also has to comply with a beating pulse and an audience, the challenge becomes even greater. At certain times, the performer will have several phrases in which to create an emotional transition, in others, only a few notes. S/he might have to move between two related emotions or between two opposing ones. The endless possible combinations suggest that each transition will offer a slightly different challenge and therefore should be carefully understood and practiced.

A good example of a drastic transition can be found in Chopin's Mazurka Op. 17 No. 4, which will be comprehensively analyzed later on in this chapter. Here the transition happens on a bar line between the middle A-major section and the return of the main theme. One moment the performer is taking part in a joyful dance and a second later crying out in despair. In order to successfully conduct this transition, the performer must let go of the joy of the middle section and choose to connect to pain, not a simple switch. The transition here takes place between two contrasting emotions and is difficult to perform convincingly unless the performer is free to express both.

Another extreme transition, although this time moving in the opposite direction, can be found in the third movement of Brahms's F-minor Piano Quintet, Op. 34. The menacing beginning is set off by an insistent pizzicato in the cello part, and is then followed by the crawling main motive of the movement in C minor. As this motive unwinds, a triumphant march in C major suddenly takes over, making for an abrupt and startling transition. The entire movement revolves around this unexpected transition and its improbability. Another added challenge here is in the fact that five people have to conduct this transition at the same time.

In order to achieve effective transitions, the performer must also weigh the importance of the emotions in the large scheme of the piece. For example, we are all familiar with the jubilant and optimistic first theme of the first movement of Tchaikovsky's First Piano Concerto, which appears twice in the exposition. The only element that separates these two festive appearances of the first theme is the short piano

cadenza, which in spite of its size, plays a pivotal role. This cadenza abruptly changes the jubilant mood into a dark and insistent search, and by doing so presents the nucleus for the movement's entire emotional conflict. The performer must understand the importance of the transition between the two conflicting emotions in this opening in order to make the transition believable and allow the rest of the movement to properly unfold. S/he must realize that this is not just a brief episode of despair, but a total collapse of the festive façade, and that the search to regain this optimism is what propels the entire movement forward.

The E major Scarlatti Sonata K. 531 offers yet another set of challenges as far as transitions are concerned. In this piece, mood changes occur in almost every phrase as the initial joy gives way to trepidation in a series of subtle changes. Scarlatti makes each phrase delve deeper and deeper into fear until the initial joy is completely gone and all that is left are fearful question marks. It is at this point that one of the most difficult transitions in this piece occurs. With no warning, Scarlatti chooses to let go of the fearful questioning state he took so much time in establishing and returns to the initial joyful mood. This sonata does not challenge only the performer's ability to let go of emotions at an extremely rapid pace, but also her ability to acrobatically switch between contrasting ones.

Another form of transition, one that has not been addressed yet, is the slow transition. In the case of this form of transition, it is difficult to determine and pinpoint where exactly the change of emotion takes place and therefore the performer needs to

remain sensitive and open for the transition to occur naturally. An example of such a slow transition can be found in the second of Schumann's *Romances*, Op. 94. As the oboe and piano emerge from the ferocious middle section back to the tender opening theme, an exquisite transition takes place. Even though one can clearly recognize the original melody on its return, it is only when the A major tonic is re-introduced that the middle section's fire and the subsequent fog finally disappear and the good-natured and tender mood of the beginning is reinstated.

Peak Points and Climaxes

It seems obvious that the performer should be able to identify the climax or climaxes in the work s/he is performing. Emotionally speaking, this identification becomes even more critical. Only if the climaxes are identified will the performer be able to accurately gauge her emotional involvement throughout a performance, and save her energy for the focal points in the piece. In Berg's Piano Sonata Op. 1, one finds a series of relentless climaxes. The emotions in this piece are exceptionally dark and obsessive, and the climaxes appear in unusually close proximity to one another.[238] In a piece such as this, it is crucial to establish the following parameters:

[238] The obsessive nature of this piece can make the performer feel quite mad. This is a feeling that was also expressed by the famous soprano Evelyn Lear, who sang the role of Marie in Berg's *Wozzeck* under Karl Böhm in over a hundred performances. She claimed that nobody should sing the part for more than a hundred performances, or they would go crazy.

1. How extreme is each of the climaxes in itself? Meaning, how far away from the center of the emotional embrace circle is the climax station located? And what is its boundary?
2. How distant are the climaxes from one another and what separates them?
3. How should one clearly distinguish between the emotional reality that needs to occur on stage, and that of the performer's daily life?[239]

Climaxes tend to be difficult to perform because they inherently stretch the performer's comfort level and ask for her utmost involvement. It is at these peak points that s/he is asked to let go of any inhibition about the expression of emotion and to be the most expressive. To some this is indeed an almost insurmountable challenge.

Endings

One also needs to know how to resolve the work's emotional conflict and bring a performance successfully to its end. To make this point clear, let us go back to the first Intermezzo of the Brahms' *Fantasy Pieces* Op. 76. As we have already seen, the piece begins in deep sorrow and reaches a peaceful state only in its last few measures. In this final resolution the performer must let go of sorrow and choose hope instead. This is a difficult task, considering that most of this Intermezzo is set in deep depression. To end this piece properly, one must be able to let go of the sadness one spent so much time and energy establishing. The performer should also remember that if s/he does not jump deep

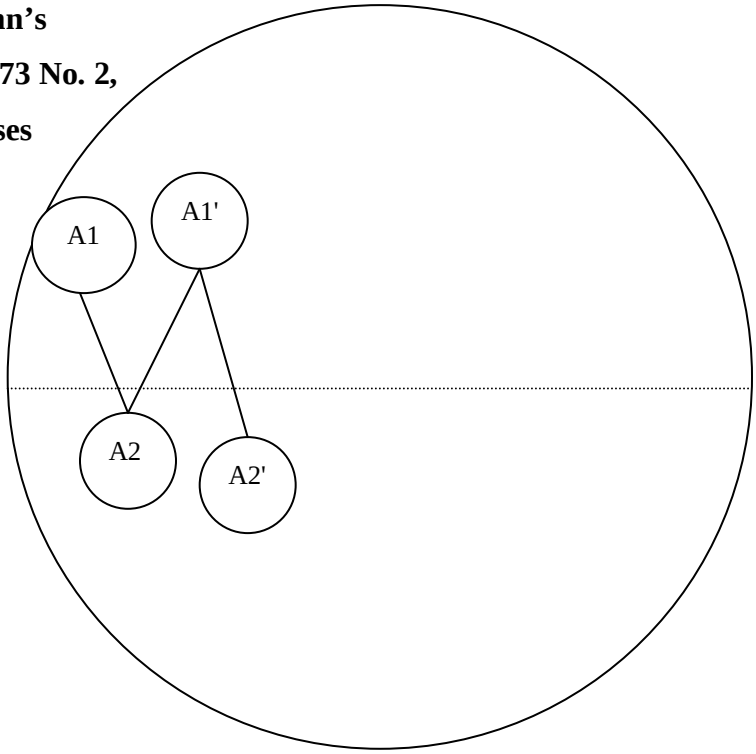
[239] For more about the merging of emotions see Chapter 1.

enough into the opening's depression and darkness, s/he will not be able to create any sort of conflict and therefore s/he will have nothing to resolve.

Oppositional Phrases

What are oppositional phrases? A composer will start an oppositional phrase by presenting a certain assumption or mood and by its end, completely negate it. If one chooses to imagine a speaker for the music, it is as though the speaker has started the phrase in one mood and ended it in another. As we have seen it is difficult enough to maintain one emotion in a phrase; and therefore, to be able to maintain two contrasting ones in the same phrase and move between them convincingly in measured time is a quite a difficult challenge. One example of such a phrase can be found in the second of Schumann's Op. 73 *Fantasy Pieces* for Clarinet and Piano (see Graph 9 on the next page). This movement starts with a simple melody in the piano part, suggesting a joyful, though a slightly agitated, mood (A1). When the clarinet joins in, the mood abruptly changes and turns somber, more introverted and a bit fearful (A2). As if this opening phrase is not enough of a challenge in itself, Schumann asks the performers to repeat it, (A1', A2') totaling three emotional transitions in the space of two phrases. It is also important to note that the repetition of the phrase does not mean a return to the identical emotions, but to a second slightly enhanced statement of them.

Graph 9: Schumann's Fantasy Piece Op. 73 No. 2, Oppositional phrases



The important point for the performer to realize here is what causes this oppositional sea-saw to occur in the first place; what is the causal connection between the phrase's opposing parts? What would make a speaker say one thing and contradict it only seconds later? According to one interpretation,[240] the opening A1 might be the words of a slightly excited suitor who is about to meet his beloved for the first time. She is the reason why his emotions are swinging between excitement and trepidation. Knowing that the propeller of the contradiction in feelings is the beloved allows the performer, representing the suitor, to naturally move between the opposite emotions with little difficulty.[241]

[240] This interpretation belongs to cellist Evie Koh, a wonderful musician and friend, with whom I had the pleasure of performing this piece in concert.

In addition to the challenges we have discussed so far, the performer should consider the following challenges:

Opposition – When the same theme appears twice or more in a piece but each time it conveys a different emotion. This is the case in C major Scarlatti Sonata K. 132, where in the A section the main theme appears in its tranquil form and in its furious minor form in the B section. The challenge here is for the performer to make a 180-degree emotional turn and still be convincing.

Sarcasm – This might appear in the works of the 20th and 21st centuries, although one can find traces of it elsewhere as well. For example, from the first notes of the first movement of Shostakovich's First Piano Concerto, one can tell that this music should not be taken at face value. The pianist's upbeat descending C major scale meeting the trumpet's D flat on the downbeat, should alert us to this fact. Later on the circus-like melodies that resolve 'incorrectly' or are suddenly interrupted (in the last movement) also serve as clues to this fact.

Background – It is the difficult task of the performer to determine what part in the music might be a speaker's voice or speakers' voices and what in the music might act as the

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[241] One also finds oppositional phrases in Mozart's music. In the Jupiter Symphony, for example, the first movement's first phrase contrasts confidence and hesitation, the second movement's first phrase contrasts tenderness and strength, and the fourth movement's first phrase contrasts mystery and humor. Another example can be found in Tchaikovsky's First Piano Concerto, in the pianist's bravura entrance to the first movement's development. What starts as a confident almost military-like E flat major passage turns half way through into a catastrophic avalanche in E-flat minor. In the quartet literature, an example of an oppositional phrase can be seen in the theme to the third movement of Mendelssohn's A minor Quartet, Op. 13.

background to a scene. In the middle section of the second movement of Brahms' Clarinet Quintet Op. 115 for example, the four string instruments abandon their original melodic characters and become a stormy background to the clarinet's rhapsodic laments. In the music of the impressionists this issue receives even greater importance, especially in works such as *Jeux d'eau* or *Feux d'artifice*, where water, light, and fire take center stage.

4.4 Applying the Method to Chopin's Mazurka Op. 17 No. 4

So far, the reader has been introduced to the fundamental principles of the Emotional Understanding Method. S/he has been presented with its basic stages and some examples of its possible application. No exposition of the method, however, would be complete without an example of a full-length analysis of a work.

In this following section, the reader is invited to examine a complete emotional analysis of a piece, in this case Chopin's Mazurka Op. 17, No 4. The analysis is predominantly based on the findings of the lecture *Tools of Expression* which was presented in the US, China, and Israel by Dr. Fabrikant and myself, in which the Emotional Understanding Method was discussed and practiced with a diverse audience comprised of students, music teachers and adult performers. Presented in this analysis are mainly their opinions and answers.[242]

Expecting to encounter resistance from our audience as well as multiple answers to the questions presented in the different stages of the method, we were surprised to encounter only moderate opposition to the application of the method and to find that most discussions led to strikingly similar answers.[243]

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[242] The lectures given in Israel were at the: Jerusalem Academy of Music, Talma Yalin Musician's High School, 'Schtriker' Conservatory in Tel Aviv and the Haifa Conservatory; in China for: the Central Conservatory in Beijing and the Zhou Guangren School for Piano Teachers in Beijing; and in the US for the Long Island Piano Teachers Association and students at The Juilliard School.

[243] The reader is invited to consult the graph on p. 176 while reading the following narrative.

Tackling the first stage and finding the emotional embrace of this Mazurka was, for the audiences as well as for Dr. Fabrikant and myself, quite difficult. It seemed that this short work resisted definition, and contained a mixture of different emotions. We decided then, to take the opposite approach and ask what the piece 'was not' about. To this question answers came fairly quickly: "It is not a joyful work. There are sections in it that are, but mostly it is a sad piece."[244] With further prompting audience members got more specific, and 'melancholic' and 'nostalgic' were some of the definitions we heard. A group of Polish piano teachers in Israel offered the Polish word 'Jal', which roughly translates to mean pain in English. These words gave us the basic emotional definition of the work.

We entered the second stage by breaking the piece down into nine different stations (See score on p. 200):

Prologue	O^1		mm. 1-4
First Theme	A		
Initial statement		a^1	mm. 5-20
1^{st} variation		a^2	mm. 21-36
Contrasting idea		b	mm. 37-44
2^{nd} variation		a^3	mm. 45-60
Second Theme	B	B	mm. 61-92
Return of First Theme	A'		
3^{rd} variation		a^4	mm. 93-108

[244] What appears in the quotation marks are generalizations of the audience's answers.

Coda	C	mm. 109-128
Epilogue	O^2	mm. 129-132

With audience assistance, we began placing these stations inside the emotional embrace circle. O^1 left the audience baffled, its harmonic ambiguity making it difficult to clearly define and place. We decided then to continue and return to it later. a^1 on the other hand proved to be a much simpler station to define: “Tenderness and love mixed with pain and sorrow”, was the common answer we heard. When asked to place it in the circle, it was usually placed slightly below the middle line of the circle. It was clear that this station included a mixture of two emotions, in which the sadness was the slightly more dominant one.

The next station, a^2, was placed in relation to the first a^1. It was defined as a 'more intense' occurrence of the first theme. For some participants this intensity meant that this station was darker than the first and they therefore chose to place it lower than the original a^1. For some the intensity meant that the tenderness and love were enhanced and they therefore chose to place the station above the original a^1. In either case, both the first and second occurrences of the theme were not placed at the same level, and were understood in relation to one another and not independently.

Station b, the contrasting idea to the first A section, offered a clear change of mood. Only a small minority of the participants heard this theme as a joyful dance, while

most heard it as an angry outburst. This latter interpretation placed the b station below the two previous stations.

The third appearance of the main theme, a^3, was understood as a slight relief after the second theme's intensity. Here the audience's interpretation was the most varied. Though all agreed that this occurrence was in direct relation to the first two appearances of the theme as well as to the preceding contrasting idea, there were several ways in which this relationship could be viewed and represented in the graph. a^3 was finally placed somewhere in the space between the original a^1 and b.

The contrasting A major theme, the B station, was heard as "bright" and "happy". It was also agreed that this theme got progressively happier and more excited with each repetition. This intensification of emotion posed a graphic challenge but the station was finally placed high above the middle line and with the added spiral lines to show the intensification of emotion.

Another unanimous decision was made about the climax of the Mazurka, which occurs in mm. 91-92. To all participants it was clear that an abrupt change took place at the end of the A major theme, and what happiness was present before had now suddenly evaporated. Because of this radical transition, the next station a^4, the fourth appearance of the main theme, was placed at the lowest point so far in the graph.

The coda theme, the C station, was understood by the audience in two different ways: either as a relief after the a^4 station, in which there is some resignation to the events that have taken place, or as an intensification of them, and therefore as a continuation of the spiraling down of negative emotions. Both views, nevertheless, shared the idea that the coda was a summation of previous events.

Not forgetting O^1 and O^2, participants now found it easier to place these stations. Most participants understood these stations to be a prologue and epilogue, and therefore decided to place both stations outside the circle.

By connecting the different stations in the piece, the emotional wave of the piece was uncovered. The wave exposed three clear emotional centers at the inner layer: longing, happiness and a painful resolution.

As for tackling the third stage of the method and finding the boundaries of the stations, generally, all participants found Chopin's elegance and classical restraint, important boundaries to preserve, meaning that no matter how extreme the emotions became, the performer should always express them with elegance and restraint, and not break Chopin's stylistic parameters.

Two specific examples of placing boundaries were discussed: the four appearances of the main theme and the four phrases of the A major theme. In both cases, each appearance asked that the boundary would shift and be placed at a different level to

allow for more expression of that emotion. For example, the boundary for the a^1 station, should have allowed for very little pain to be expressed, but with each of the repetitions (a^2, a^3, a^4) it needed to be moved lower and lower to allow for more pain to be incorporated. The same principle, though in the opposite direction, needed to be applied to the A major theme. With each appearance of the A major phrases, the performer had to allow for more lightness and more happiness to be included, and therefore place the boundary progressively higher.

Since the discussion of the following two steps, the performer's connection and disconnection, is inherently subjective, what was presented in the lecture was only one of many possible interpretations, in this case Dr. Fabrikant's interpretation. In her view, this Mazurka depicts the emotions that arise as a result of a relationship breakup. The speaker's voice we hear in the piece is that of one of the lovers, reminiscing: in O^1, she introduces us to the memory of this love, the hope and tenderness; in a^1, to the longing and to the separation; in b, to the pent up anger that arose; in B, to the happiness and good times the couple had had; the climax depicts the turning point in the relationship and the turn to loneliness; in a^4, she expressed the pain caused by separation; in C, the acceptance of the breakup; and in O^2, finally she returns to the memory of the love, but we now realize that this dream of love exists only in her imagination.

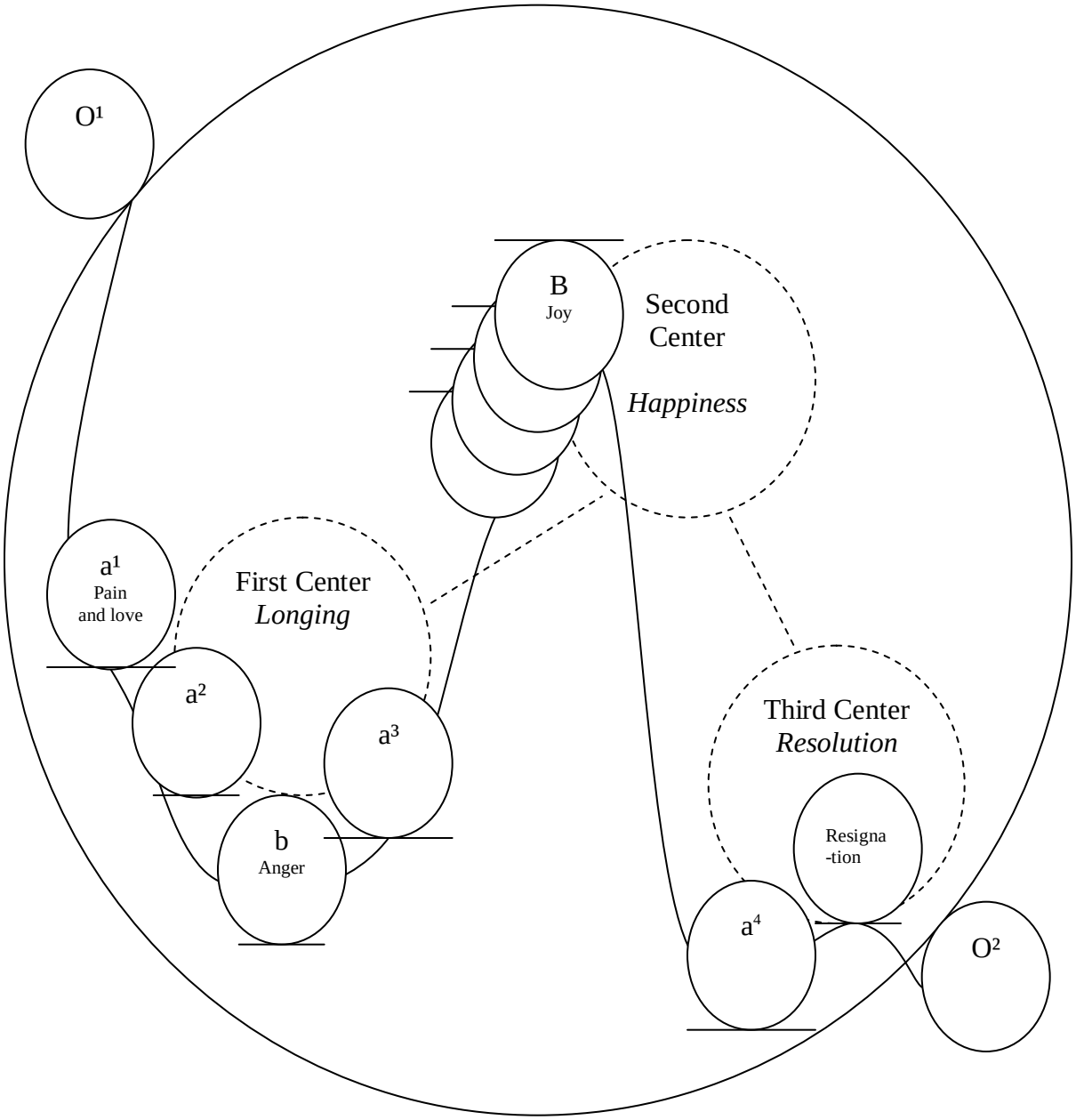
The way Dr. Fabrikant chose to disconnect from this story was through using a memory of a breakup that happened in her past. This form of disconnecting gave her a clear path to these difficult emotions without having to deal with the added danger of

being overwhelmed by them. The emotional analysis reveals that the challenge that this Mazurka poses for the performer is in expressing dark and painful emotions convincingly as well as in performing delicate and at times extreme transitions between emotions.

While writing this document, a different scenario to this Mazurka, was suggested to me by my advisor, Dr. Carl Schachter. Poland, as Chopin felt deeply, was a country which was constantly torn and oppressed by other countries, its land divided in Chopin's day between Austria, Prussia, and Russia. The Mazurka, danced and performed in the Warsaw salons of the time, was then also used as a symbol for expressing feelings of nationalism and patriotism. With this information in mind, one could perhaps consider the longing, the pain and strong sense of nostalgia of this Mazurka to be not for a person, but rather for one's country.

Graph 10: Emotional Understanding Graph of Chopin's Mazurka

Op. 17 No. 4 in A minor



4. 5 Afterthoughts

The advantage of the Emotional Understanding Method is that it gives the performer a thorough and systematic tool to investigate the progression of emotions in a piece of music. This conscious viewing should make the accessibility of these emotions under pressure somewhat simpler. One should also remember not to view the work done with this method as a one-time event, but as an ongoing process, which invites as many changes and corrections as the performer feels are needed. In searching for the answers to the different stages, the performer must continually question and oppose her own answers and conclusions until there is little doubt left and s/he is thoroughly convinced by her interpretation. Also, a new perspective might emerge when revisiting the piece months later. As one grows older and hopefully wiser, one's emotional vocabulary grows to include many more colors and nuances, which might offer a better fit for the piece in question. One should therefore not hesitate to change one's conclusions and take advantage of a new perspective.

I have practiced this method with many of my students, from the very young to the more mature teenagers and adults, in both private lessons and chamber music coachings, and have found that the initial reaction to the method in most cases was very similar.[245] At first students would be hesitant. Most would not cooperate and argued against going through the method's stages by using arguments such as: "How do you know this is what the composer meant for a fact?", "I don't think about music this way"

[245] See Appendix B, p. 218.

and "This is too simplistic."[246] But with some encouragement and a promise that one does not have to marry one's interpretation, but just start the process of creating one, most students ventured in.

The results, even from my point of view, were surprising. Students with very little knowledge of technique or structure, learned to sustain large complex structures, improve the control of their instruments and their stage presence, and penetrate contemporary compositions in original and imaginative ways. Most importantly, they seemed to be enjoying themselves in the process of creating an interpretation, and so it seemed, was the audience listening to them.

On another front, working with a living composer served as a good test for establishing the accuracy of the method. Performing Avner Dorman's music was a chance for me, as a performer, to discuss the emotional content of a work with the actual composer. It was encouraging to discover that, after comparing his answers with mine, the differences between our understandings of the emotional content of the music were negligible.[247] Whether one is dealing with the responsibility of performing a work for the first time or with the responsibility of performing an old masterpiece for the *n*th time, one is facing the challenge of being convincing. The performer must help the audience climb

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[246] I heard these statements quite regularly working as coach for the New York Youth Chamber Music Program.

[247] Avner and I met many times to discuss my interpretations of his works. From these meetings, it became clear that for Avner, emotion and structure were intertwined. It was difficult for him to address the emotions in a work as such, and he much preferred discussing tempi and dynamics. The emotion, for him, was something that was to be understood from the score and added by the performer, and the entire process for him seemed to be taken for granted. To paraphrase his words: "Of course there is X emotion there, you would have to be deaf not to hear it."

the wall of opposition and accept new works, as s/he must help those who heard the Mendelssohn Violin Concerto for the millionth time hear it afresh. To be truly convincing, the performer must involve her own emotions in the creation of a solid interpretation.

Chapter Five

Merging Structure and Emotion

5.0 Merging Structure and Emotion

Before we address the question of how the merger between structure and emotion occurs, let us examine the basic assumption one more time. We have seen that in order for a performance to be truly convincing and for the performer to convey the full potential of a work to an audience, the performer must have a solid understanding of the piece's structure, of the piece's emotional conflict and a technical mastery to bring them to life. Each of the three parts of the basic assumption is a pillar or perspective on which the ideal performance stands. In the performer's hands these pillars become actions.

It is important to note yet again, that the principles that make for these three pillars are fundamentally and essentially different from one another. In the case of the emotional pillar, the building blocks are connotations, associations, subjective opinion and imagination. In the case of the structural pillar, the building blocks are harmonies, intervals, rhythms, forms and style. In the case of the technical pillar, and this depends on which instrument one is playing, the building blocks are body motions and the performer's breath. There is clearly significant overlap among the different pillars and the perspectives they offer, yet one should keep in mind that they are fundamentally different from one another in their respective departure points.

All three perspectives are vital to one's performance. For example, it is clear that if a violinist cannot play the notes to Ravel's *Tzigane*, then the discussion of the merger between structure and emotion would be irrelevant. Neither emotional understanding nor structural analysis will be of any use to the performer if s/he does not possess the basic technical skills that will allow her to play the notes. Though realizing the joy behind a particular passage might give the performer the appropriate color, and a structural analysis might reveal better phrasing for an extraordinarily difficult passage, it is clear that unless the performer knows how to move her hands in a way that they will allow her to play the notes, no merger between structure and emotion will occur.[248] One of the reasons for not naming this document "the merging of structure, emotion and technique" is that every instrument requires a different technique, and therefore has a different equation to balance.[249]

Let us go back now to the question at hand: how does the merging between structure and emotion occur? The answer to this is that the merger in fact takes place in the actual playing of a phrase. In the case of piano playing, both heart and mind meet in the physical actions of the fingers. To be more specific, the performer must have enough

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[248] This statement is of course also true with regard to music which is technically simpler. One must have technique in order to be able to execute both structural and emotional decisions, in a Bach Minuet as well as in a Liszt Transcendental Etude. "As with all music, emotional power is embodied in the technique that expresses it." This quote is taken from: Bruce Adolphe, *Of Mozart, Parrots and Cherry Blossoms in the Wind* (New York: Limelight Editions, 1999),109. Although Adolphe is referring here to the technique the composer requires which will enable him to express his emotions in music, that same holds true for the performer as well.

[249] As far as piano technique is concerned the reader is urged to contrast different piano techniques and their validity. For example contrast the Dorothy Taubman technique versus the Russian school and strength training (Hanon, etc.)

musical knowledge to realize the music's structure and be able to then translate this understanding into a set of practical and performable set of decisions. S/he must also be sensitive enough to bring out the emotional content of the music by allowing for yet another set of decisions to be made. While technique is first the ability merely to play the notes, it is also the meeting place of the two sets of structural and emotional decisions. Through technique the performer can allow for both the structure and the emotion of the music to come through her fingers and instrument and be experienced by the listener.

Music should be viewed as a holistic phenomenon as Steven Mithen's research demonstrates. We have seen that the early-human communication system was holistic in nature, and that both music and language still carry the holistic fingerprints of earlier times. The division therefore between structure, emotion and technique is made here for the sake of discussion only.

Let us then go deeper into this question of how to merge structure and emotion by considering what a note is in a piece of music. The three pillars give us three different perspectives and answers. According to the technique perspective, a note is a result of a body action, a motion. In the case of a pianist, it is a finger pressing on a key, which in turn allows for the hammer to hit the string and produce a sound wave. For the singer, on the other hand, a note is created by the vibration of her vocal chords. A note, according to the technique perspective, is a physical action which results in sound.

The structural perspective indicates that a note is only a detail in the larger picture, a small brick in the entire structure. It could be a crucial note, a part of the

urlinie perhaps, or it could be a negligible note, a part of an arpeggiation. A note, according to the structure perspective, could be only fully understood in relation to other notes.

The emotional perspective provides another viewpoint. It claims that a note is a means to convey an emotional intention, whether by its structural placement, by its referential meaning, or by both. Its articulation by the performer carries with it an emotion, which should be transmitted to the listener. This perspective will say that to fully understand a note, one needs to realize the emotional intention behind it.

It is clear that all three perspectives are equally valid. A note in a piece of music is a physical action which is motivated by both emotion and structure. But how is it that these three very different perspectives are merged into one? Or perhaps as we have seen, they are already merged by their shared history and the fact that they all stem from the early-human communication system? If one explores the human hand for example, one will see that it contains all three simultaneously. One can view, as scientists do, the structure of the hand: how the tissues, the bones, the different joints and blood vessels are functioning in this organ. One could then discuss possible actions made by this hand (in essence the technique perspective), such as a punch or a gentle caress, and ask what emotion has motivated these different actions (the emotion perspective). The hand serves as a clear example of the merger among the different perspectives, of how both a physical (Structural) manifestation and an emotional intention are expressed in action (Technique). In the case of making a fist, anger motivates us to tighten the muscles and

clench our fingers and our minds will tell us in which direction it is best to hit the opponent. In the case of caressing, love motivates us to let the muscles relax and allow the fingers to open and sense more of the caressed surface. In the case of music, emotion has motivated the composer to put notes together in structure.

Clearly, there are essential differences between the human hand and music. In the case of the hand the merger among the three perspectives happens naturally. One does not need to trouble oneself with the hand's structure in order for it to function properly. The connection between the hand's structure and the emotional impulses is also instinctive, and sometime, as we have seen in Chapter 1, with very little cognitive involvement. In the case of music, it could also be said that one is going to hear, feel and perform a note instinctively and that the merger is done subconsciously. This position is also supported by Mithen's conclusions, which claim that the merger between music and emotion is millions of years old. But unlike the human hand, western classical music is a man-made phenomenon, and therefore the merger among the three perspectives will not always occur naturally. To this one should add that in the transfer between composer's intentions to performer's execution, some of the natural aspects of this process could be lost as well. One should then distinguish between the different levels in which this process can occur. If we look at a child's attempts at playing music, we can see how intrinsic the merger is. The structure is usually very simple, the technical level required is basic and the emotional complexity is narrowed to joy and sadness. The older one gets, and the more difficult the music becomes, the more one needs to deepen one's understanding of the different perspectives. One needs to learn new technical skills to

allow for the execution of difficult passages, to understand the way complex structures are organized, and to realize a wider emotional spectrum. It is at this level that the merger of the three perspectives becomes more difficult and therefore requires more conscious involvement from the performer.

The question then remains, how and when does the performer become aware of the merger between structure and emotion in music? Performers are used to assume that this merger, like the one that occurs in the human hand, is a natural one and is mostly done unconsciously. The performer does not need to consciously realize that a classical period *Allegro* movement in C major is expressing positive emotions such as joy and happiness. Her familiarity with the style and her sensitivity will tell her this subconsciously. The merger usually becomes more conscious when problems start arising: when one finds that for some reason one cannot perform a certain passage to one's full satisfaction, or when one is not clear about the emotional intention of the composer. It is at this point that it is necessary to start exploring the passage in light of the three pillars and perspectives in an attempt to isolate the cause of the problem.

Let us examine this issue of isolating the root of the problem, by making yet another analogy. The merger between emotion and structure in music is similar in some ways to the merger between a family and a house. The house, as a structure, enables the family to live and function. The dining room, for example, is designed to have all family members present and enjoying a meal together; its structure is designed to contain an event. In music, the structure of a Schumann character piece, for example, is designed to

contain a character; Eusebius, Florestan, or Paganini.[250] This relationship between the structure of the piece and the emotional content is usually what composers agonize over, while performers are just asked to express the already engraved relationship. But since as performers, we mostly receive structural indications from composers, we run the serious risk of mismatching and/or misaligning the visible structure with the more hidden emotional content. Structure and emotion are fundamentally different, as a house and a family are, but both are united by their sheer presence in the same physical space. When one tries to isolate the cause of the problem, one should take into consideration that the problem might lie either in structure, emotion, technique and/or in their alignment. One should therefore take extra care in exploring the merger points between the different perspectives, and make sure one has realized the relationship between structure and emotion correctly.

A problematic performance and a very simple case of a conflict between structure and emotion could be found in the next example. If the performer chose to perform Chopin's *Funeral March* from his Second Piano Sonata (marked *Lento*) in a tempo that is closer to an *Allegretto,* one might find that this tempo choice will not reflect the true emotional content of the piece, but make the music sound more like cartoon music than a real funeral march. On the other hand, if the performer has submerged herself in the grief of the piece, and as a result the tempo has deteriorated to a *Grave*, the performer runs the risk of losing the overall structure of the piece as well as losing her audience in this

[250] The titles are taken from Schumann's *Davidsbündlertänze,* Op. 6, and *Carnaval,* Op. 9.

movement's many repetitions.[251] In order to properly match structure and emotion, house and family, one must take into consideration the specific emotional intention behind the piece as well as the structural limitations posed on it by the composer. Awareness is the key in solving these problems and in creating a solid merger.

[251] Of course there are different possible tempi for this movement and no 'one' right tempo. But whichever tempo the performer eventually chooses it must reflect the somberness of a funeral march to some degree.

5. 1 Structural Decisions

The previous section examined the merger of structure and emotion from a general viewpoint. We have seen that in some instances the merger happens subconsciously, while in others it becomes conscious due to misalignment as well as other problems in interpretation. A more proactive approach to conducting the merger between structure and emotion is also available. In this approach, the performer is asked to consciously make two sets of performance decisions: structural decisions and emotional decisions. S/he must then determine at what places in the piece these sets of decisions coincide and in which they conflict. By realizing some possible conflicts ahead of time and by making the entire process conscious, the performer has better chances of merging structure and emotion in actual performance.

As we have already discussed the emotional set of performance decisions at length, this section will concentrate on the structural ones.[252] Before going into specifics, let us once more reinforce the importance of structural understanding of music for performers. Musical structure and logic stand firmly on their own, as has been shown in Chapter 2 by the structuralists' viewpoint. Music can be understood, appreciated and loved solely as a structure in sound. The performer should therefore always consider the musical structure independently of the emotional content and understand it on its own merit. This means that the performer should investigate the harmonic hierarchy, the

[252] Since there is plenty written on this subject of structural analysis, this section only mentions the important branches of an analysis, assuming the reader is familiar with some if not all of the material presented.

resolution of dissonances, rhythmic relationships, and understand under which laws of musical reasoning the composer constructed the piece. This information will help explain the composer's intentions and the best possible interpretation of the piece. Let us stress this point once more: the performer must look at the music objectively and in terms of musical logic. Only then will s/he be able to reach the true emotional intention behind it.

Obviously, conducting a structural analysis of a piece of music can be done in varying levels of depth.[253] The objective of this section is to generally consider the essential structural decisions the performer must make before s/he reaches the performance and how these decisions could affect the performance. First, the performer must define the overall structure of the piece, whether it is in sonata form, rondo form, binary or ternary structures, etc. It is also advisable for the performer to learn about the history of the specific form and become familiar with other examples of it by the same composer as well as by others.[254] The performer should be able to distinguish the different sections in a piece and realize in what way they relate to one another, for example the key scheme in sonata form.[255]

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[253] The following sources are tremendously helpful in deepening one's understanding of musical structure: Heinrich Schenker, *Free Composition* (Hillsdale, New York: Pendragon Press, 2001), Felix Salzer, *Structural Hearing* (New York: Dover Publications, 1962), Allen Cadwallader and David Gagné, *Analysis of Tonal Music: A Schenkerian Approach* (New York: Oxford University Press, 1998), Edward Aldwell and Carl Schachter, *Harmony & Voice Leading* (United States: Thomson/Schirmer, 2003), Felix Salzer and Carl Schachter, *Counterpoint in Composition* (New York: Columbia University Press, 1989).

[254] A comparison of classical sonata forms for example, as they appear in the works of Haydn, Mozart, Beethoven and Schubert, can be a particularly useful exercise in establishing common and uncommon tendencies in the form, and can also help in identifying the different attributes and compositional styles of each of these composers.

The next stage in analysis consists in breaking down the piece into phrases. One should start this stage by marking the beginnings and ends of phrases. At first, this task might seem tedious and perhaps redundant, since the performer might feel that s/he can identify the beginnings and endings of phrases without too much difficulty. This is indeed true in some cases, while in others, and especially in contemporary music, it might not be the case. Marking the phrases in a piece will usually open the performer's eyes and ears to interesting characteristics of the work, such as uneven phrases of five or seven measures, question/answer phrases and classical-style periods.[256]

After completing the marking of the phrases in the work, the performer should conduct a harmonic, melodic and rhythmic analysis of these phrases. While conducting the harmonic analysis of the phrase, it is important for the performer to note which of the harmonies are expected and which are unusual, which are 'out of place' and which obey the more common rules of the harmonic progressions of the period. (These rules clearly change depending on the time period and composer.) More than identifying each harmony by its proper name, it is important to realize the relationship between the harmonies, by conducting a Roman numeral analysis or simply by labeling chords. The

[255] It is always advisable to compare and contrast parallel sections in a piece. For example, play the second theme of a sonata form movement, as it appears in the exposition and immediately after play it as it appears in the recapitulation. This method of juxtaposition can help the performer establish the overall arch of the piece by making her aware of the inner relationships between those sections.

[256] Uneven phrases, performed unnoticed, can torpedo an entire performance. The basic pulse of the piece usually shifts in them, the performer's breathing scheme can be ruined, and a very special feature of the work might go unnoticed. The opening phrase of the previously discussed Scarlatti Sonata in D minor for example, has nine measures, while the opening phrase of Brahms' Intermezzo Op. 117, No. 3, has five. In both cases planning ahead and realizing the special nature of the phrase will help the performer sustain it better.

more unexpected relationships are points that the performer should bring out in performance, as these are the crucial intersections and turns in the plot of the piece.[257]

Besides realizing the harmonic relationships in a phrase, the performer should also become aware of the phrase's harmonic rhythm. Noticing the rate of harmonic change in a phrase will help the performer choose the best possible tempo for it. A fast harmonic rhythm for example, usually suggests a relatively slower overall tempo in a phrase, while a slower harmonic rhythm usually suggests a faster one.[258] The performer should then proceed to examine the melodic contour of the phrase. This melodic analysis should tell the performer which notes and intervals are the most important in the phrase and which are subsidiary.[259] The performer should also be aware of how the composer is resolving (or not resolving) intervals, and be able to identify structurally important notes as opposed to unfoldings and arpeggiations. This is especially helpful in dealing with

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[257] For example, more than knowing that the opening phrase of Beethoven's *Appassionata* starts on an arpeggiation of an F minor triad, and moves to the Neapolitan chord, an arpeggiation of a G flat major chord, it is important for the performer to realize how intense and unexpected this modulation was in its time, and also that this half step between the tonic and the lowered second scale degree, plays a pivotal role in the construction of the entire piece.

[258] In the case of the D minor Scarlatti, the harmonic rhythm is one harmony per measure. This fact should instruct the performer to worry less about the right hand's fast repetitions and worry more about the direction of these harmonies in the phrase. This type of prioritizing has a tremendous effect on the technical aspects of a performance. For more on harmonic rhythm see Edward Aldwell and Carl Schachter, *Harmony & Voice Leading* (United States: Thomson/Schirmer, 2003). See under reduction and rhythm and chord progression.

[259] "The rules of musical style and the rules of a language are profoundly different. Those of music do not provide meaning in the same way that linguistic grammar provides meaning to language. While 'man bites dog' is fundamentally different from 'dog bites man', reversing the order of three notes is of far less significance to a piece of music. It may make the piece sound awkward, but the reversal cannot be said to change its meaning, because there was none to change in the first place." Mithen, 20. The opening to the first movement of Beethoven's Fifth would surely 'lose its meaning' if the descending major third was ascending instead (E flat to G). This comment by Mithen shows just how important intervals and their direction in a phrase are.

technically demanding passages. By realizing which notes are structurally important the performer could worry less about each and every note in a passage.[260]

The rhythmic investigation of the piece should be conducted on several different levels. The performer should determine the overall tempo of the piece, its boundaries, and some possible ways of conducting the piece, to help establish a sense of the general pulse and overall flow. The performer should also examine the pulse of the phrase by trying different counts such as counting half measures, whole measures and hypermeasures.[261]

Once the performer has gathered this basic information about the piece, s/he is ready to determine the direction of the phrase as well as realize the relationships between the different phrases. The climax of a phrase is usually determined by a combination of elements such as a strong and/or unusual harmonic progression, a critical intervallic leap, and/or a clear dynamic or articulation marking indicated by the composer. A structural analysis of a piece could be also enhanced by understanding the texture of the phrase and the role of each voice, i.e. accompaniment, melody, counterpoint, etc. plays. It could be also enhanced by realizing a comfortable breathing scheme for a phrase and by identifying the tension between the different voices in the piece, such as which is moving

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[260] Schenker's analytical principles in this case become tremendously helpful in telling the performer which notes are crucial and which are subsidiary. A specific example of a melodic analysis is given on p. 206 with regard to the opening phrase of Brahms' E minor Cello Sonata Op. 38.

[261] This type of counting helps one practice the phrase's direction. This form of practicing was conveyed to me by David Dolan of the Guildhall Music School and is based on Arthur Schnabel's principles. For more information see Konrad Wolff, *Schnabel's Interpretation of Piano Playing* (New York: W.W. Norton, 1979) and Edward Aldwell and Carl Schachter, 42.

forward and which holding back.[262] This process of gathering information about the structure of a piece will result in a set of decisions made by the performer about how best to perform it. As the phrases are organized according to musical logic and as the performer has a strong understanding of the special structural features of the piece, it is more likely that the performer's emotional understanding will be similar to the composer's intention.

[262] The idea of the performer's breathing scheme refers to how the performer chooses to breathe during a performance of a piece. This idea is of course integral to the work of wind instruments and singers, but is only superficially discussed in piano and string playing.

5.2 Examples

Let us start with an example of the merger as it takes place in modern language, and examine this simple sentence: "The salad is great." Several options for emphasis are possible here. One option would be to emphasize the adjective: 'great'. This emphasis will ensure that the listener knows one's opinion of the salad. On the other hand, one could emphasize the words 'the salad', as opposed to some other not-so-great dish. Or one could emphasize the word 'is', supporting someone else's comment. The sentence takes on a slightly different meaning according to one's emphasis. The words and structure of the sentence as well as one's chosen emphasis are therefore critical to the listener's understanding. But, and as we have already seen, there is an entirely different dimension to the sentence which relies on the emotional state and intention of the speaker – the prosody of the sentence. The sentence can be delivered with enthusiasm, making the salad seem as though it was the best dish ever consumed. It could be said flatly with no expression whatsoever, or it could be said with sarcasm, ensuring that the listener knows one's true opinion of the salad. This latter inflection completely negates the original structural meaning of the sentence.[263]

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[263] One of the famous scenes in Shakespeare's *The Taming of the Shrew*, is constructed around the contradiction between the literal meaning and the emotional meaning of a sentence. As Petruchio is 'taming' Katherina, he points at the sun and claims that it is the moon, to see whether she has finally been tamed and will blindly support his statements, even as this one is clearly a lie. Eventually Katherina does break down and repeats her husband's lies. Since all she is doing in this scene is repeating her husband's words, the beauty of the scene lies in the intonation the actress chooses for the repetitions of her husband's lines. Is she going to mock him? Is she going to repeat his lines helplessly admitting he has won and she has lost her freedom? Or is she going to be playful and join him in his taming game? Shakespeare was clearly aware what a powerful tool the merger between structure and emotion could be in the hands of a great performer.

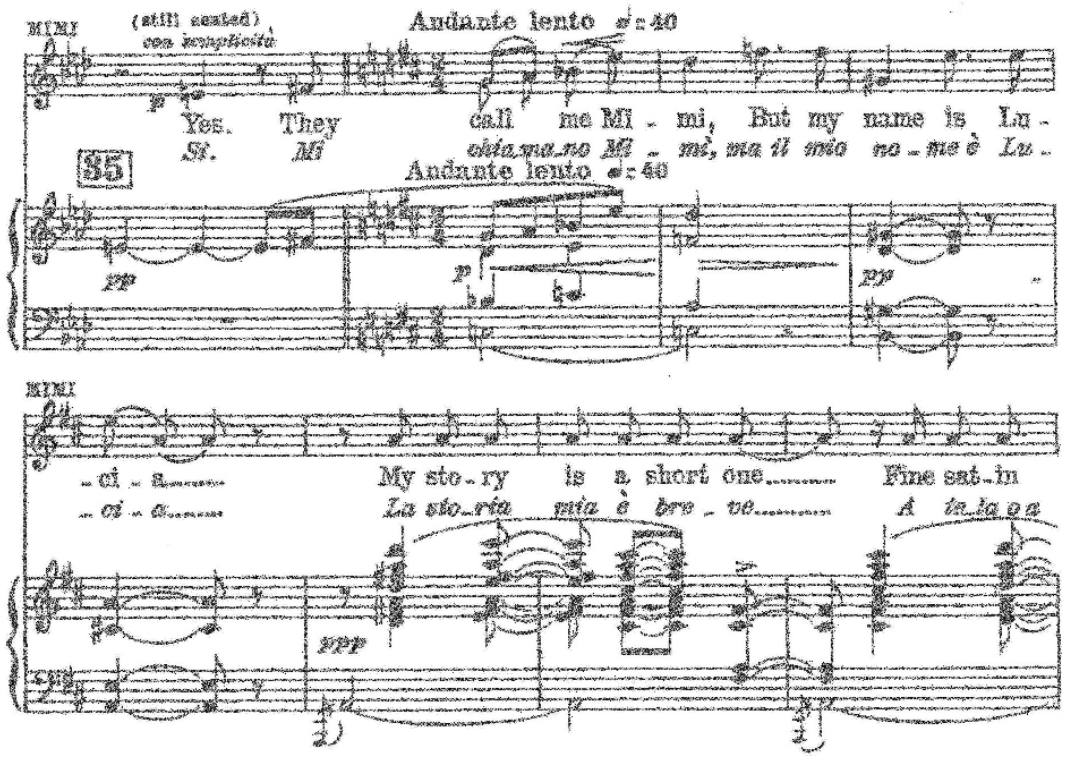
The emotional intention of the speaker can shift the meaning of a sentence and could potentially negate its meaning, regardless of the sentence's structure. This is of course similar to what happens in the case of a musical phrase. On the one hand, it is imperative that the performer have a good grasp of musical grammar and know which part of a phrase is structurally the most important. But at the same time s/he must also be attuned to the emotional intention behind it, since her lack of awareness can result in the complete negation of a musical sentence.

Examples

Since the merger between emotion and structure is much simpler to discuss when language is present, let us start with an operatic example before moving on to an instrumental one.

In the famous *La Bohème* aria "*Mi chiamano Mimi*," Mimi is telling her neighbor Rodolfo about her life. Examining the first phrase, we see that Puccini chose to put a D major key signature, even though the first implied tonic is F major. The phrase's ascending line is harmonized by a C major ninth chord, suggesting the key of F major, and resolves accordingly to an F major chord (with an added sixth). It then, however, modulates to an A major chord, according to the key signature, the 'real' dominant of this aria. This play on real and unreal is matched in the text. Mimi first says, I am called Mimi, to the deceptive dominant on C, but then says that her real name is Lucia, as the real dominant A is heard.

Ex. 1 [264]



Structurally speaking, the soprano could emphasize the surprise modulation by creating a color change between the two halves of the phrase. She could start with perhaps a very luscious tone, and then alternate it with a more delicate tone for the phrase's second half. If we look at this phrase from the emotion perspective, we will see that there are other important dimensions to it. On the surface, Mimi is trying to be polite and casual with Rodolfo as she tells him the very basic facts about herself, at the same time she is also flirting with him. To this, one should add that Mimi is not only a poor lonely girl but also a very sick one, and this shadow of sickness can give a very different color to this aria. The merger between structure and emotion in this case is again a

[264] The example is taken from Giacomo Puccini. *La Bohème*. Vocal Score. (New York: Dover Publication, 2000), 70.

combination of two planes that meet in the singer's performance choices and in her actual singing. The singer has to realize the structure of the music, the direction of the phrase and the important harmonic changes in it, and at the same time stay true to the character's emotional reality on stage.

For an example of the merger between structure and emotion in solo instrumental music, let us go back to Chopin's Mazurka Op. 17, No. 4. The Mazurka is a common Polish folk dance from the Mazovia region,[265] but to the classical music audience it is more commonly known today as the dance that served as the inspiration for a set of stylized keyboard works by Chopin. How does the merger between structure and emotion take place in this work? How does Chopin create the sense of longing and despair in the music? The answer lies in the harmonic, melodic and rhythmic characteristics of the work.[266] The sense of longing and despair in this piece is created by the tortured relationship between the F, the sixth scale degree in A minor, and E, the fifth scale degree.[267] The desire of F to resolve to E and Chopin's deliberate avoidance of this resolution are the chief agents of longing in the Mazurka, and, when finally resolved, of despair. Already from the opening measures, we see that by delaying the resolution from F to the E, Chopin creates a state of suspension, suggesting perhaps the illusion of hope.

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[265] For more about the history of the Mazurka see the Stephen Downes article "Mazurka" in Stanley Sadie ed., *The New Grove Dictionary of Music and Musicians*, Second edition (New York: Macmillan Publishers limited, 2001). Other composers who wrote Mazurkas are Scriabin and the Polish composer Karol Szymanowski.

[266] See score on p. 200.

[267] Cooke discusses in length the descending 6-5 (in minor) and concludes: "The chief and almost only expressive function of the minor sixth is to act as an appoggiatura on to the dominant, giving the effect of a burst of anguish." Cooke, 146-150.

This suspension reaches its fullest form in mm. 91-92, in a crashing fortissimo, but still without the resolution to E. Only in the coda, mm. 115-116, does Chopin finally allow the F to resolve to its lower adjacent tone E, and even yet this resolution is hidden in the alto voice.

The feeling of suspension is also enhanced by other means such as the avoidance of root position triads and the absence of a clear cadence in the Mazurka's tonic key for the first nineteen measures. The piece begins with an ascending appoggiatura in the middle voice of the D minor 6/4 chords. (Note here the unresolved F, which is repeated in the top voice of left hand chords.) By creating subtle changes in the voice leading, Chopin moves the first theme phrase from D minor to F major, and from a G seventh chord to E minor, a change which suggests at the same time both hope and despair. He then allows the harmonies to continue and descend in a series of chromatic suspensions, which make one almost cringe, but which only lead to the second repetition of the main theme in m. 13, albeit with slight melodic and rhythmic variations. It is only after nineteen measures that Chopin finally resolves the phrase in a clear cadence to A minor.[268]

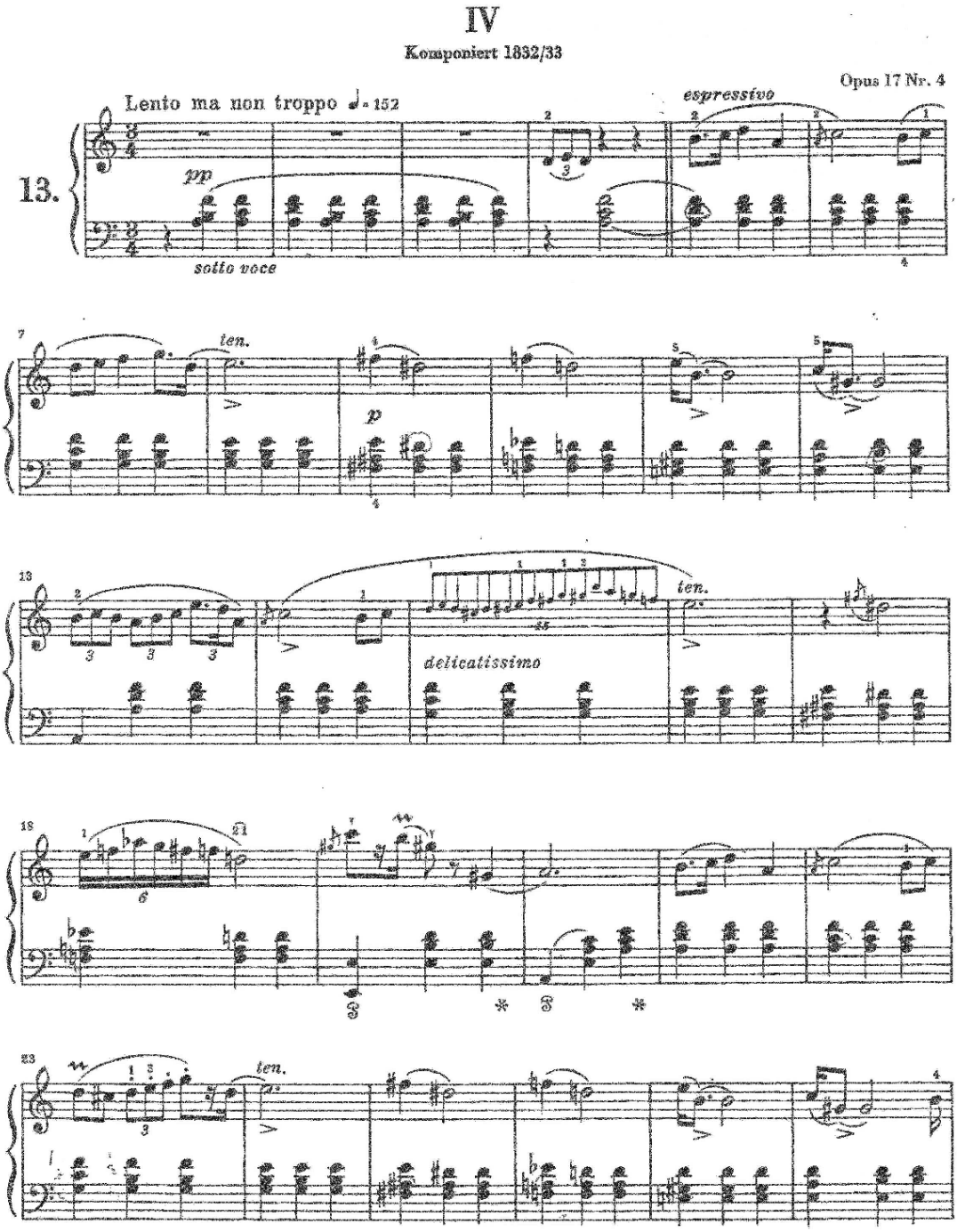
The idea of longing is also supported by the melodic contour of the phrase as well as by the chromatic motion in the left hand chords' inner voice. The first theme is constructed out of two ascending phrases, the first culminating on C and the second on E, which are followed by a long descending phrase, made out of four small descending

[268] This instance of delaying resolution is a good example of what Leonard Meyer describes as tension is music, cadences which create a sense of not being fully resolved.

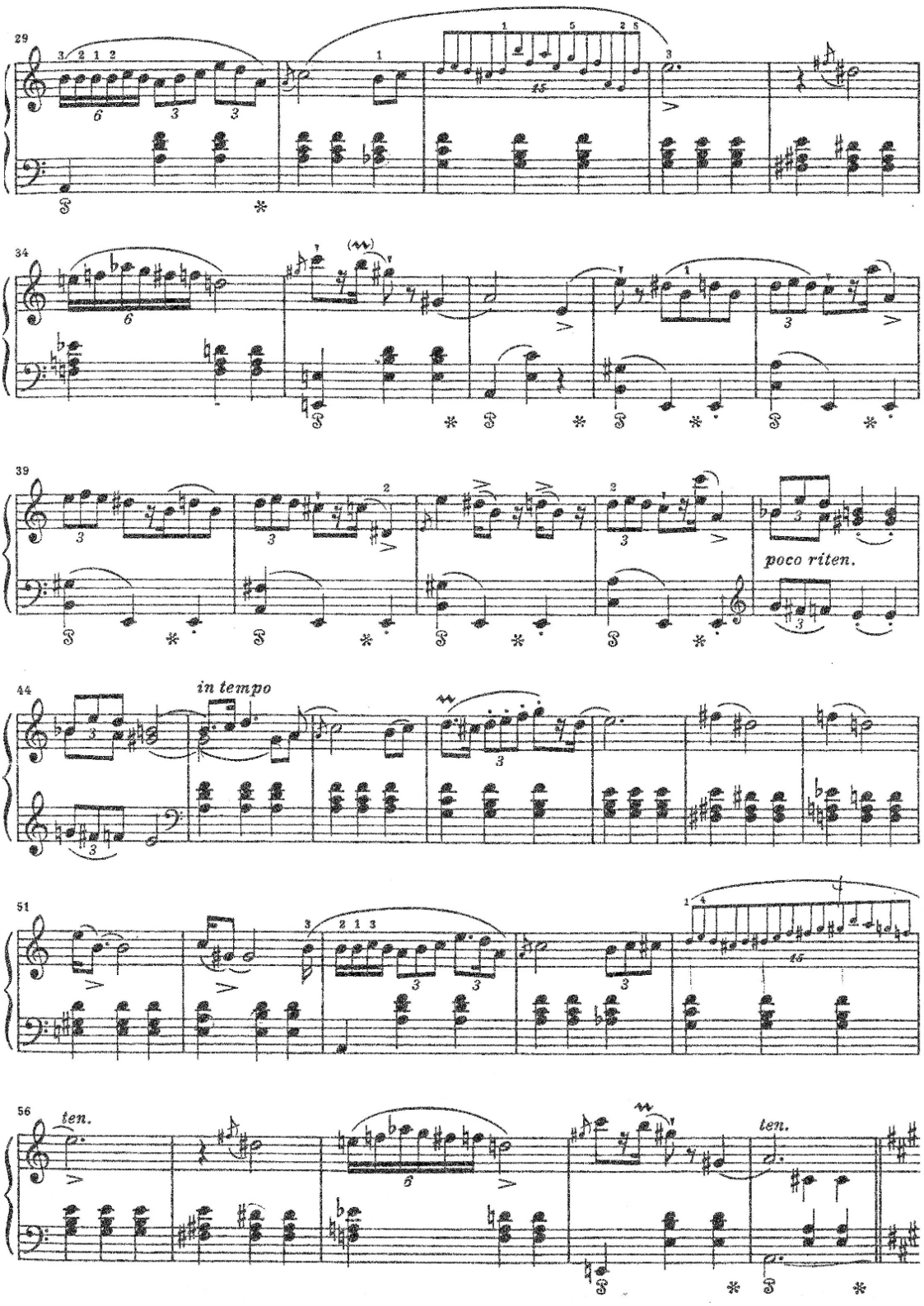
gestures. The first two ascending phrases suggest longing and hope, but as the second phrase is resolves into an E minor chord, one understands that the hope is only an illusion. The middle voice of the left hand chords turns into a chromatic descent, supporting the general feeling of being pulled down, and somewhat echoes the baroque period's laments.

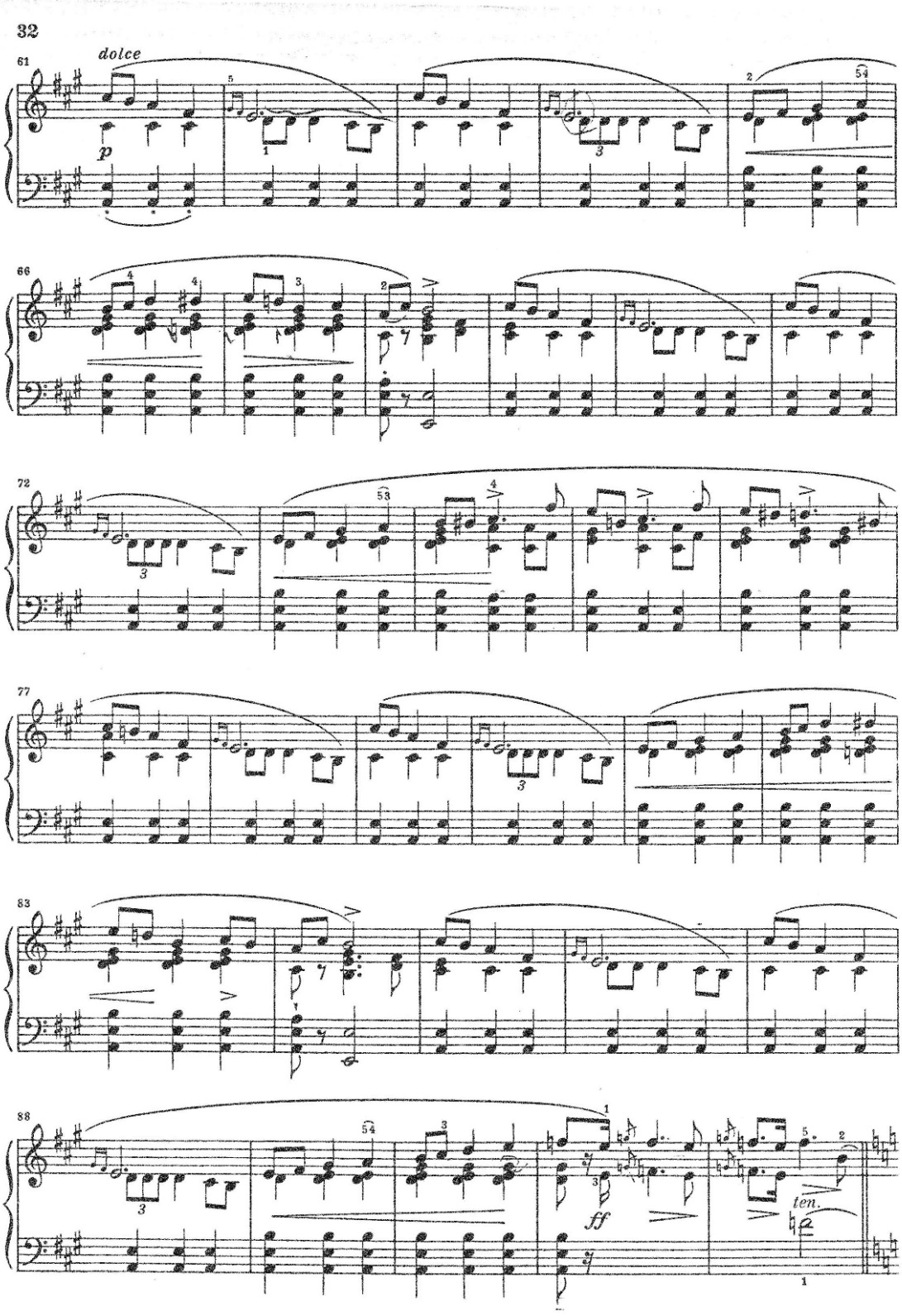
The texture Chopin uses in this Mazurka helps establish the atmosphere as well. Throughout the piece, Chopin maintains the texture of a solo vocal line with light accompaniment, which should remind the listener of a great aria perhaps by Bellini, a composer Chopin greatly admired. The loneliness of the vocal line and the slow pace of the repeated chords are the chief agents of the melancholic atmosphere in the piece.

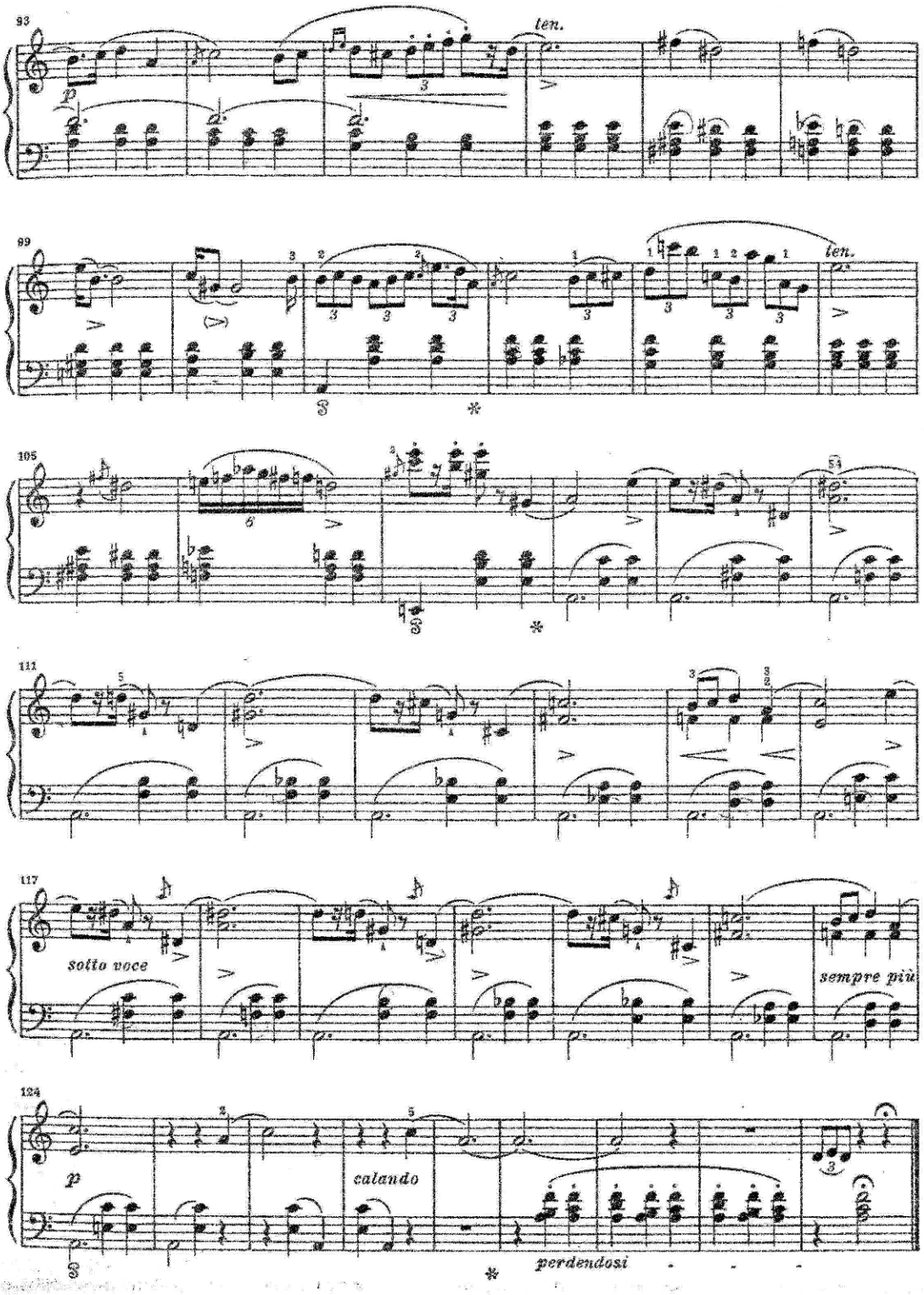
Ex. 2[269]



[269] Frédéric Chopin. *Mazurkas* (Munich: Henle Verlag, 1978), 30-33.


29
34
39
poco riten.
44
in tempo
51
56
ten.
ten.


32
61
dolce
p
66
72
77
83
88
ff
ten.


93
len.
p
99
len.
105
111
117
sotto voce
sempre più
124
p
calando
perdendosi

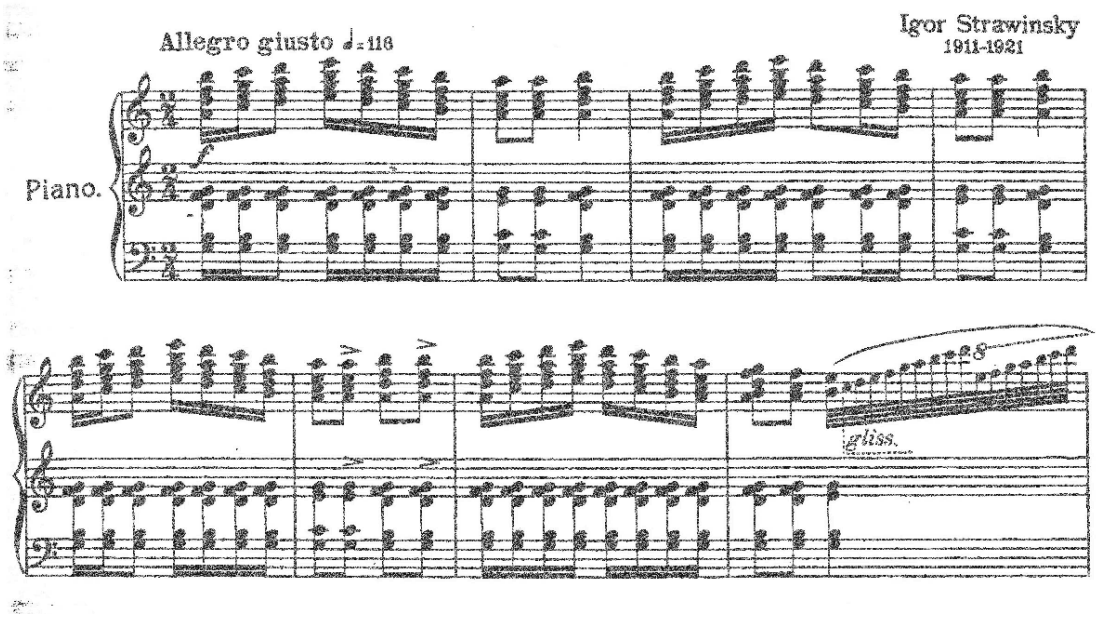
Generally speaking, both the structural analysis and the emotional understanding of this Mazurka suggest the same conflict, a mixture of longing and despair. Still they do so in two very different ways. The structural logic is more precise and shows which harmonies resolve in an unusual way and at what point in the phrase a modulation takes place. The emotional layer, on the other hand, is vague. It lies behind the actual notes and depends on whether the performer chooses to become aware of its existence and express it or not. When coming to perform this piece, the performer must become aware of those structural devices Chopin uses here, so s/he can bring them to the forefront of her performance and make full use of them. At the same time, similarly to a singer in a Bellini opera, s/he must infuse these notes with the proper emotional intention.

A different example of the merger can be found in the opening theme to Stravinsky's *Dance Russe*, the version for solo piano (see Ex. 3). Emotionally speaking, the performer must transmit a sense of joy, freedom and exuberance to the listener while structurally s/he must realize the very fast tempo this phrase requires and understand that it is constructed out of little segments that repeat with different emphasis each time. Her responsibility is therefore not only to maintain the breakneck tempo but also to emphasize for the listener the different turns of the phrase.

The texture of this opening poses the most difficult challenge. The melody that in the orchestral version is heard so clearly in the piccolos and flutes, here can only rely on the pianist's fifth finger, making this phrase difficult to voice. The performer's technique

should enable her to achieve all of the above, and at the same time, hopefully, to connect to the emotional intention of this passage – to joy.

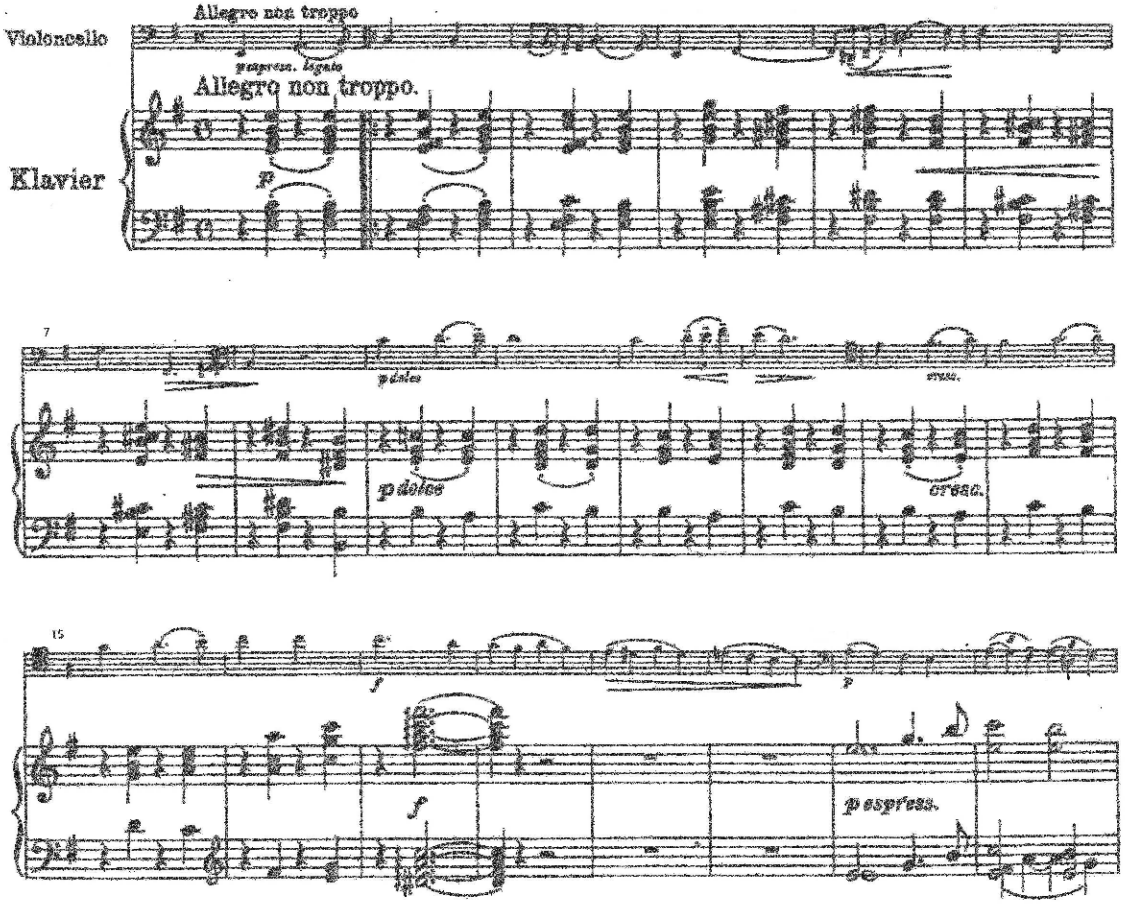
Ex. 3 [270]



In Brahms' Op. 38 Cello Sonata, the opening theme offers yet another form of challenge (see Ex. 4). Again, from the perspective of emotion, the performer's task is to communicate the sense of nostalgia which is so dominant in this piece. Her challenge is to create a sense of remembering something or someone which is no longer there.

[270] Igor Stravinsky, *Trois Mouvements de Petrouchka* (Florida: Masters Music Publications, Inc.), 3. This example appears by arrangement with Masters Music Publications.

Ex. 4[271]



Structurally speaking, the cellist has to plan her way through this very long first theme (mm.1-20) very carefully. [272] The first segment is perhaps the simplest one; it is a melody based on the arpeggiation of an E minor chord, but already at its end the first surprise takes place as the Brahms concludes it on an F sharp major chord, the secondary dominant. Mm. 9-12 are probably the sweetest measures in this phrase. For a moment the cellist lingers in the new tonality of the relative major, reminiscing, but soon enough,

[271] Johannes Brahms, *Sonata for Piano and Cello in E minor Op. 38* (Frankfurt: C. E. Peters), 2. Copyright © 1928, renewed 1956 by C. F. Peters Corporation. Used by permission of C. F. Peters Corporation.

[272] The measure numbers are according to Johannes Brahms, *Sonata for Piano and Cello in E minor Op. 38* (Vienna: Wiener Urtext Edition, 1973).

s/he is forced to move on to a set of small sequences that push her to reach the theme's climax in m. 17 on the note C supported in the piano by a D sharp diminished seventh chord.

The cellist should then consider these three events: the surprise move to F sharp, the brief tonicization of G major, and of course the high C, as the focal points in the phrase.[273] S/he should connect these events in a way that makes sense to her so that the listener will become aware of them. To aid the performer in making this phrase coherent, Brahms' tempo indication is an *Allegro non troppo*, a relatively fast tempo for the expressive content of this phrase. A cut time marking and the syncopated piano part also help push this long theme forward. The merger in this case happens very subtly. Emotion is most definitely the moving force behind this theme: the nostalgia of the opening measures, the sweetness of the G major and the cry of agony on the diminished chord at its end. But these emotions are to be expressed at very specific points in the theme, and it is the performer's ability to express them at these specific points that will make for a successful merger.

We have discussed here the merger of emotion and structure in the microcosm of a phrase, but this is not to say that the merger does not also take place in the larger macrocosm of a complete work. In Brahms' D minor Violin sonata, for example, the performers are asked to merge the large structure of a four-movement work with some disturbing emotions.

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[273] One can divide this long opening theme into an eight-measure phrase, a four-measure phrase and another eight measure phrase, 8+4+8, to help with its organization.

All four movements of this sonata are dealing in essence with the emotional conflict between love and what is caused by love's absence: longing and frustration. The first-movement exposition presents a conflict between the main theme (mm. 1-24), in which the violin and piano seem to be restlessly searching for love, and the second theme (mm. 48-73), which is a reminiscence of it.[274] The development section (mm. 84-129), a unique section as it is accompanied by a constant pedal point on A in the piano left-hand part, seems to be an elaboration of the first theme's searching, while in the coda (mm. 208-264), one finally realizes what was lying underneath the first theme's restless search: the despair of being unable to find love.

The second movement explores the more tender sides of love and friendship, but here too, they are followed by dark shadows that never seem to disappear completely (mm. 19-24 and mm. 51-56). In the third movement, the scherzo, where traditionally lighter emotions are expected, the pattern established in the first movement is repeated. This movement oscillates between a new 'searching theme' in the piano (mm. 1-52), perhaps a more naïve one than found in the first movement's, a sense of hope (mm. 53-64 and mm. 75-85), ferocious outbursts (mm. 65-74 and mm. 86-96), faith (mm. 97-105), and the loss of all hope in a short piano cadenza (mm.106-118). The specific merger challenge in this movement can be seen in Brahms' tempo indication: *Un poco presto e con sentimento*. The music moves quite rapidly in this movement but the movement's emotional depth must nonetheless be maintained.

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[274] The measure numbers are according to: Johannes Brahms. *Sonata for Piano and Violin in D minor Op. 108* (Vienna: Wiener Urtext Edition, 1973).

The last movement, in sonata-rondo form, contrasts anger and hope. The first theme of the movement (mm. 1-38), on its eighth-note triplets, demonstrates some of the angriest writing in Brahms' chamber music. These triplets are vicious and relentless in both the violinist's and pianist's parts, and to make sure his intention is clear, Brahms' marks this movement *Presto*. The second theme (mm. 39-54), on the other hand, is a more peaceful and hopeful chorale. As the movement progresses, the emotions keep spiraling down until the movement's coda is reached (mm. 311-337), and all shred of hope is lost. The structural challenge for the performers in this movement is that they have to present the conflict between anger and hope not once, but twice (owing to the sonata-rondo form). Both times the performers are asked to let go of anger and convince the listener that matters could be resolved, only to be disappointed time and time again.

In each of the four movements of this sonata, the performers have to balance strict forms and explosive emotions. The difficulty in maintaining this balance becomes clearer unfortunately with the less successful performances of this work. It seems that the performances that are centered on the expression of the emotions of this piece tend to be exaggerated, resulting in too slow or too fast tempi, while the ones that center on structure tend to be dull.

In the symphonic repertoire, there are a few added challenges to the already complicated merger between structure and emotion. This repertoire is as emotionally turbulent as that of any genre, while the performance forces needed to execute it are perhaps the most difficult to control. In the one corner we find the composer and his

emotional intention, in another we find the conductor and his interpretation of this intention, and in yet another corner we find the players, who have to make these intentions intelligible to an audience. As we have seen, the merger between structure and emotion is difficult enough when there is only one performer trying to balance the composer's intention with her own understanding of it. This challenge undoubtedly intensifies when there are such large forces involved.

In Mozart's Jupiter Symphony, for example, the challenge the conductor and musicians are facing are in establishing the style (clear texture, phrasing and tempi) as well as in joining forces to communicate Mozart's emotional intention. Could the players unite and express the confidence and exuberance of the opening measures? Could they then contrast this confidence with the hesitation which follows in the next measures or with the 'battle' scene of the development section? The conductor's task is not only to make the basic structural decisions for the piece, but to also to unite the players around what s/he perceives to be Mozart's emotional intention.

5.3 Document Conclusion

> A work of art is guided both by the feelings and the intellect: the intellect brings craftsmanship to bear on realizing the overall shape which is felt before it is intellectually apprehended.
>
> In this way, one can explain how those who have a feeling for music but no technical knowledge can justifiably be said to 'understand' a piece of music – the form is apprehended as an emotional shape, as it must have originally been conceived by the composer.
>
> Deryck Cooke[275]

We started this document by searching for ways to implement Horowitz's basic assumption and by asking how the performer could merge a technical proficiency of the instrument, a structural understanding of the score and a clear position regarding the emotional content of a piece of music to create the ideal performance.

We explored the emotion pillar of the basic assumption, and saw that emotions are fundamental to human existence, that in order to fully understand them one has to take into consideration both their physiological and psychological aspects and that by using empathy, via the complex mechanism of mirror neurons, one learns how to communicate and comprehend them. We also realized that music and language have both evolved from the early human communication system where they were once inseparable, and that therefore both are channels for the communication of emotions.

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[275] Cooke, 31, 32.

We then examined the ties between music and the emotions from the philosophical viewpoint, and realized that one can take either the structuralists' approach or the referentialists approach, or indeed both. We realized that there are at least six intersections tying music and the emotions together and that with the aid of the collective consciousness and the ability to identify connotations and associations in music one could decipher the emotional content of a piece. We then explored the performance experience from yet a different perspective, that of network science, and established that the concert hall could be viewed as a non-directed network, in which sounds, sights and emotions percolate and catharsis occurs.

Noticing the gap between the skewed ideals of the current general and music education systems, and returning to the original challenge of merging structure and emotion, we presented the Emotional Understanding Method, as one possible way for helping the performer take a clearer position regarding the emotional content of a piece. Finally, we examined the merger between the structure and the emotion pillars in actual performance. Though they obey different sets of rules, stem from fundamentally different domains, and give different insights to the piece, their merger nevertheless is essential for any performance to be fully satisfying.

In the words of Arnold Schoenberg:

> It is not the heart alone which creates all that is beautiful, emotional, pathetic, affectionate, and charming; nor is it the brain alone which is able to produce the well constructed, the soundly organized, the logical, and the complicated. First, everything of supreme value in art must show heart as well as brain. Second, the real creative genius has no

> difficulty in controlling his feelings mentally; nor must the brain produce only the dry and unappealing while concentrating on correctness and logic.[276]

My hope is that this document has reached the goals it set out to meet and has made the vision of a vibrant classical music world in the future slightly more real. I also hope that the presentation of the information in the early chapters has made the reader realize how profoundly important emotions are to music and to our lives in general, how deeply connected music and the emotions are, and what is the true role of the performer on stage. Lastly, I hope that the Emotional Understanding Method presented here would help those who are interested in exploring this aspect of emotional expression in performance further, and help merge both a deep structural understanding of the score with expressivity on stage.

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[276] From "Heart and Mind in Music" Leonard Stein, ed. *Style and Idea: selected writings of Arnold Schoenberg*. (Berkeley: University of California Press, 1984), 53.

Appendixes

Appendix A

The Emotional Understanding Method – Observations by Dr. Einat Fabrikant

As performers, there are many questions that we come across throughout our careers. There are times for concentrating on execution and there are times for self-inquiry. As we constantly change in our personal lives as well as in our performance ability, we need deeper and more thorough answers for ourselves. I found myself in the phase of self inquiry one day in my late twenties. I felt that as a pianist and as a teacher, I needed to answer many fundamental questions and get to some bottom-line answers. I was feeling stuck and felt that my playing came to a stage of repetition and expression that was well planned, yet one-dimensional.

In the beginning, my instincts directed me towards improving my technique and the study of the structure of my pieces. After all, this was mainly what I learned in music schools: if you improve your technique and grow with the structure of your pieces, and if you are basically talented and able to express yourself, the right emotion and inspiration surely will come along. I improved my technique and deepened my interpretation, but the more I did, the more I realized something was missing. The more I took apart the components of my performance, the more I found myself not able to put them back together with the same ease as before.

I tried to consult with my teachers and with other musicians, but realized I might have to walk this path alone. As my search continued, I was lucky enough to meet and start working with Eliran Avni, who I felt was facing the exact same problems. Then, in a process of questioning and influencing each other we both came to some wonderful and important conclusions which would permanently affect our playing and teaching. By learning from this process and by giving lectures about it around the world, I realize that many of our colleagues and music students face the same issues, and those should be addressed and discussed among musicians everywhere.

The main problem, of course, is that music is an abstract art. It is merely sounds and the connection between them. When musicians come to discuss more philosophical and metaphysical issues, they realize they might not make sense talking about abstract topics. In an era of scientific research and data, we look for proofs of trial and error. In music, there is no real proof beyond the analysis of notes and the connection between them. We all know, of course, that there is so much more. Stuck at this point, many express that music is very personal, suggesting subjective feelings and interpretations. It cannot be described or put into words, because everybody has her own story. Also, everybody finds different interest in music: technique, the intellectual challenge, self expression, and the combination of them all.

When we approached this topic, however, we were interested exactly in that "X", that point where most musicians stop and fail to discuss. We realized though, that through a dialogue between musicians this "X" can be defined and the more we define it,

the more the unknown becomes known, and we will be able to deal with it and better express ourselves.

Our lectures in many music schools and teachers' organizations proved that emotional analysis is the easiest topic in the world. In the beginning, we were concerned that the more musicians we will get together, the more opinions we would get. This proved to be wrong. In fact, the more musicians we got together, the more creative ways they found to share their feelings about analyzing the pieces and to get to the exact agreement about the meaning of the piece with all the other musicians. This was also the case in the lectures in China, where I surprisingly found that musicians were even more natural when discussing their feelings about the piece. There were some exceptions, of course, when some thought discussing feelings in music is too intimate and too personal. We respected it. However, what we learned was that by analyzing emotions in music most of us actually feel and respond in the same way, no matter how advanced we are and what is our cultural background. Down in the emotional level, we are capable of describing music and responding to it on the same way as the next person. No matter how disappointing this might be, those were our findings.

Personally, this process of sharing the emotional analysis, understanding the relationship of the performer and the instrument, and understanding the connection to the audience in performance, gave me a freedom of expression I never had before. By defining my emotions and the composer's emotions in the piece, I was free to get to more variety of color, of expression, and to reach new sides in my expressivity that I never

even knew before. I believe today I am more familiar with the spectrum of emotions in my playing and able to more easily connect with them in many different situations and under pressure. Finally, I came to realize how it all worked together: emotion, technique and structure. I could also take each component apart and put it back together again more naturally and with much more confidence. It is amazing; when you explore the unknown more and are able to touch many sides of yourself, things connect together much more easily and you feel that the knowledge was always inside you and perhaps may be universal.

I hope that this subject of emotional analysis will become part of a musician's education and that more musicians will put an emphasis on it. Maybe one day we will have discussion groups on this topic in music schools. Until then, we are happy to document our experience and share it with many musicians around the world.

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